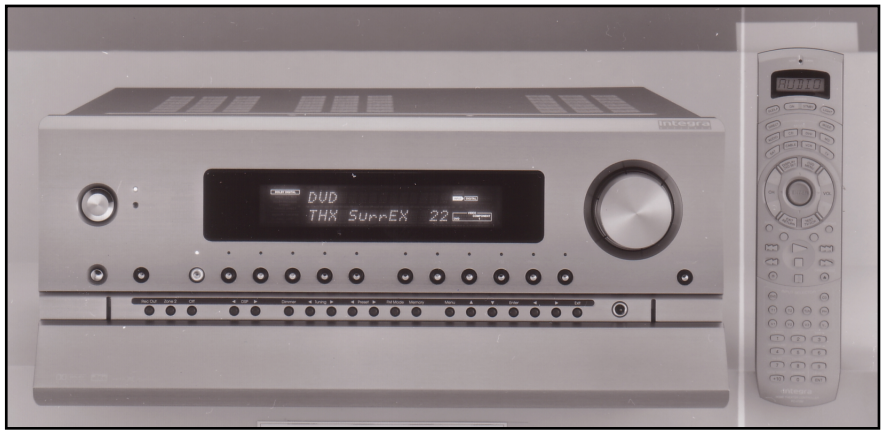
No.3653
Sep,2000

Integra® RESEARCH **SERVICE MANUAL**

AV Controller

MODEL RDC-7



Silver model

UDD, UDT	120V AC, 60Hz
UPP,UPT	230V AC, 50Hz
UGT	220 -230V AC, 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ! ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PARTS NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FORM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

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SPECIFICATIONS

CONTROLLER SECTION

Input Sensitivity and Impedance
- PHONO : 2.5 mV, 50 kohms
- LINE (CD, TAPE 1-2, DVD, VIDEO 1-5) : 200 mV, 50 kohms
- MULTICHANNEL INPUT (FRONT L/C/R, SURROUND L/R, SURROUND BACK L/R) : 200 mV, 50 kohms
- (SUBWOOFER) : 36 mV, 50 kohms
- COAXIAL 1-5 (DIGITAL) : 0.5 Vp-p, 75 ohms
- DVD, VIDEO1-5 : 1 Vp-p, 75 ohms
  : 1 Vp-p, 75 ohms (Y)
  : 0.28 Vp-p, 75 ohms (C)
- COMPONENT VIDEO 1-3 : 1 Vp-p, 75 ohms (Y)
  : 0.5 Vp-p, 75 ohms (P_B , P_R)

Output Level and Impedance
- Rec out (TAPE 1-2, VIDEO 1-2) : 200 mV, 2.2 kohms
- Pre out(RCA) : 1 V, 470 ohms
- Pre out(XLR) : 1 V, 470 ohms
- ZONE 2 OUT : 100mV, 470 ohms
- VIDEO (VIDEO 1-2, MONITOR OUT, ZONE 2 OUT) : 1 Vp-p, 75 ohms
  1 Vp-p, 75 ohms (Y)
  0.28 Vp-p, 75 ohms (C)
- COMPONENT VIDEO OUT : 1 Vp-p, 75 ohms (Y)
  0.5 Vp-p, 75 ohms (P_B , P_R)

Phono Overload : 110 mV RMS at 1 kHz, 0.5% T.H.D.
Frequency Response : 20 Hz to 30 kHz : ±1dB
(CD in, Direct mode)
5 Hz to 100 kHz : +1dB,-3dB
(CD in, Direct mode)
RIAA Deviation: : 20 to 20 kHz : ±0.8 dB
Tone Control
- Bass : ±10 dB at 100 Hz
- Treble : ±10 dB at 10 kHz

Signal-to-Noise Ratio (Stereo)
- PHONO : 80 dB (IHF A, 5 mV input)
- CD/TAPE : 100 dB (IHF A, 0.5 V input)

TUNER SECTION

FM

Tuning Range : 87.5 — 108.0 MHz (50 kHz steps)
Usable Sensitivity
- Mono : 11.2 dBf, 1.0 µV (75 ohms IHF)
  0.9 µV (75 ohms DIN)
- Stereo: : 17.2 dBf, 2.0 µV (75 ohms IHF)
  23 µV (75 ohms DIN)

50 dB Quieting Sensitivity
- Mono : 17.2 dBf, 2.0 µV (75 ohms)
- Stereo : 37.2 dBf, 20 µV (75 ohms)

Capture Ratio : 2.0 dB
Image Rejection Ratio
- USA & Canadian models : 40 dB
- European & Australian models : 85 dB

IF Rejection Ratio : 90 dB
Signal-to-Noise Ratio
- Mono : 76 dB
- Stereo : 70 dB

Alternate Channel Attenuation : 55 dB
Selectivity : 50 dB (DIN)
AM Suppression Ratio : 50 dB
Total Harmonic Distortion
- Mono : 0.2 %
- Stereo : 0.3 %

Frequency Response : 30 Hz — 15 kHz, ±1.0 dB
Stereo Separation : 45 dB at 1 kHz
30 dB at 100 Hz — 10 kHz

AM

Tuning Range
- USA & Canadian models : 530—1,710 kHz (10 kHz steps)
- European & Australian models : 522—1,611 kHz (9 kHz steps)
- Asian models : 531—1,602 kHz (9 kHz steps)

Usable Sensitivity : 30 µV
Image Rejection Ratio : 40 dB
IF Rejection Ratio : 40 dB
Signal-to-Noise Ratio : 40 dB
Total Harmonic Distortion : 0.7 %

GENERAL

Power Supply : AC 120 V, 60 Hz
AC 230 V, 50 Hz
AC 220 V, 50/60 Hz
Power Consumption : 75 W
Dimensions (W × H × D) : 450 × 196 × 440 mm
17-11/16" × 7-11/16" ×17-5/16"
Weight : 16.2 kg, 35.7 lbs.

REMOTE CONTROLLER

Transmitter : Infrared
Signal range : Approx. 5 meters, 16 ft.
Power supply : Two “AA” batteries (1.5 V × 2)

Specifications and features are subject to change without notice.

Power supply and voltage vary depending on the area in which the unit is purchased.

SERVICE PROCEDURE

1. Replacing the fuses

This symbol located near the fuse indicates that the fuse used is show operating type, For continued protection against fire hazard, replace with same type fuse , For fuse rating, refer to the marking adjest to the symbol.

Ce symbole indique que le fusible utilise est e lent. Pour une protection permanente, n'utiliser que des fusibles de meme type. Ce demier est indique la qu le present symbol est apposre.

REF.NO.	PART NO.		DESCRIPTION
F9001	252163	⚠	4A-UL/T-237, Fuse <UDD, UDT>
F9002	252074	⚠	2A-SE-EAK, Fuse <UPP,UPT, UGT>

NOTE : <UDD> : 120 V model only
<UDT> : Asian model only for 120V
<UPP> : European model only
<UPT> : Asian model only for 230V
<UGT> : 220V model only

2. To initialize the unit

This device employs a microprocessor to perform various functions and operations. If interference generated by an external power supply, radio wave, or other electrical souce results in accident which causes the specified operations and functions to pperate abnormally.
To perform a result, please follow the procesure below.

1. Turn teh Power switch to on.
2. Press and the hold down the VIDEO-1 button, then press the STANDBY/ON button.
2. After " clear " is displayed, the preset memory and each mode stored in the memory, such as surround, are initialized and will return to the factory setting
3. Press the STANDBY/ON button.
4. Disconnect the power supply cord.

3. Safety-check out

(Only U.S.A. model)
After correcting the original service problem perform the follwing safety check before releasing the set to the customer
Connect the insulating-resistance tester between the plug of power supply cord and terminal GND on the back panel.
Specifications: More than 10Mohm at 500V

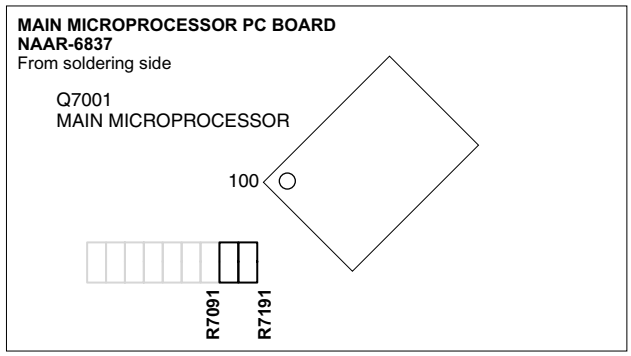
4. Memory Preservation

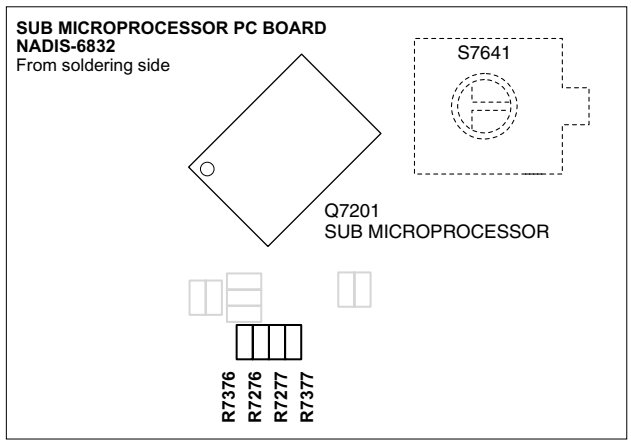
This unit does not require memory preservation batteries. A built-in memory power back-up system preserves the contents of the memory during power failures and even when the unit is un-plugged. The unit must be plugged in order to charge the back-up system.
The memory preservation period after the unit has been unplugged varies depending on climate and placement of the unit. On the average, memory contents are protected over a period of a few weeks after the last time the unit has been unplugged. This period is shorter when the unit is exposed to a highly humid climate.

5. Changing the AM band step

When you change the band step, change the parts as shown below.

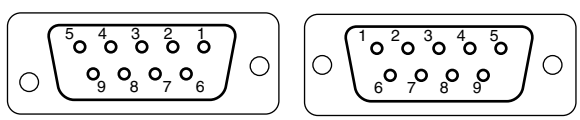
	To 10kHz	To 9kHz
R7091	Short	Open
R7191	Open	10 kohms
R7276	Short	Open
R7277	Short	Open
R7376	Open	10kohms
R7377	Open	10 kohms



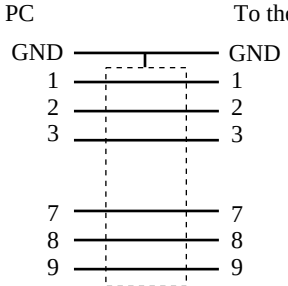


6. Connection of computer

When you change the program of microprocessor or control the unit by the computer, connect the cable RS232C of straight type between a computer and terminal RS232C on the rear panel.



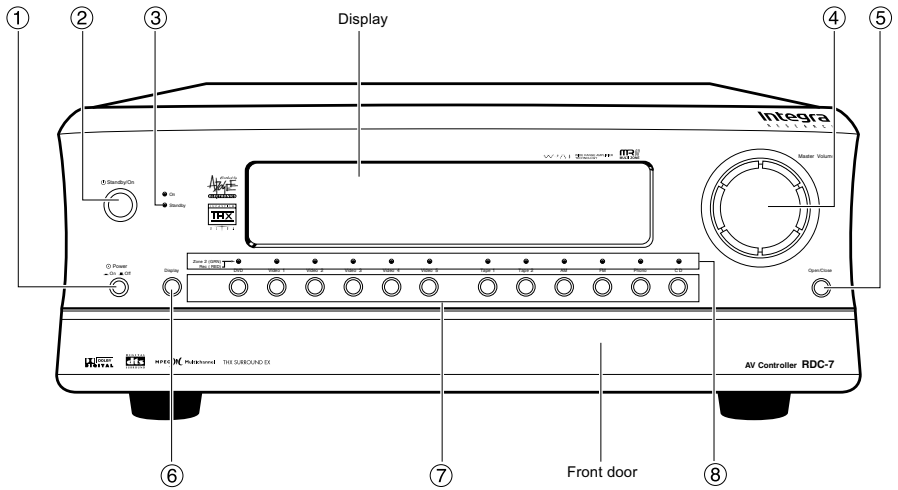
To PC To the unit



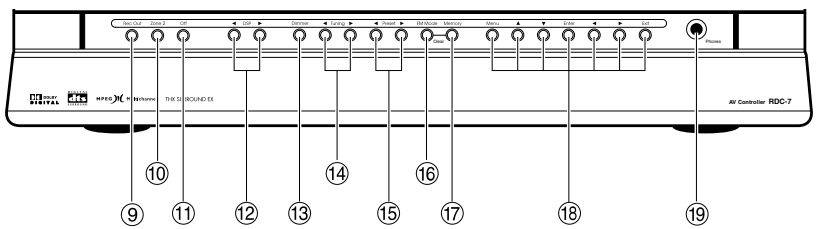
Front panel facilities

Here is an explanation of the controls and displays on the front panel of the RDC-7.

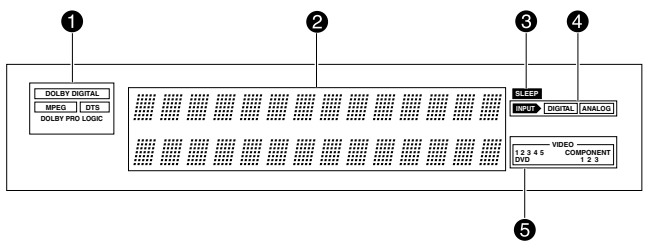
Front panel



Front panel door



Front panel display



Front panel

① Power

After plugging in the power cord into the rear panel and wall outlet, pressing this button connects the RDC-7 to the AC mains and turns it on.

- ¥ Before turning on the power, make sure all cables are properly connected.
- ¥ Turning on the RDC-7 may cause a momentary power surge that might interfere with other electrical equipment on the same circuit. If this is a problem, plug the RDC-7 into a different electrical circuit.

② Standby/On

Pressing this button while the main power is turned on the STANDBY indicator lights up and the front display turns off. Pressing it again returns it to the standby state. This state turns off the display, disables control functions, and turns off all outputs to the main zone (those for the remote zone remain available).

③ On and Standby indicator

④ Master Volume

The MASTER VOLUME knob is used to control the volume for the main zone. The volume for the remote zone (Zone 2) is independent.

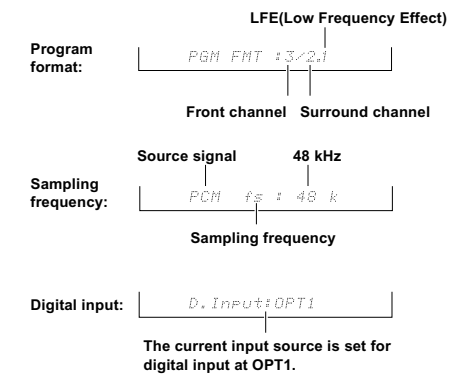
⑤ Open/Close

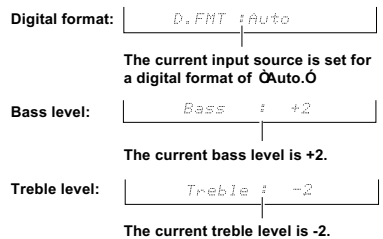
Press this button to open and close the front door that covers the lower buttons.

⑥ Display

The DISPLAY button is used to display information about the current input source signal. Each time you press the display button, the screen changes to show you different information concerning the input signal.
The screen changes as follows:
Program format → Sampling frequency → Digital input → Digital format → Bass level →Treble level.
If the input source signal does not have any information for a particular screen, then that screen will be skipped.

- ¥ **Displaying the data of the current input source**
  Each display is explained below.




Digital format:
D.FMT :Auto
The current input source is set for a digital format of ÒAuto.Ó
Bass level:
Bass : +2
The current bass level is +2.
Treble level:
Treble : -2
The current treble level is -2.

⑦ Input Source Buttons (DVD, VIDEO 1Ð5, TAPE 1Ð2, AM, FM, PHONO, and CD) and Indicators

These buttons are used to select the input source for the main zone. When an input source is selected, the indicator will light in blue. To select the input source for the remote zone (Zone 2) or recording out (Rec Out), first press the Zone 2 or Rec Out button, and then the desired input source button.

⑧ Zone 2/Rec Indicator

For Zone 2, the indicator above the selected input source button will light green. For recording, it will light red.

Lower buttons in the front door

Caution:
The front door of the AV Controller is motorized. Use the open/close button to open or close the door. Manually opening or closing the door, or moving the AV Controller while holding the door, will cause the door to malfunction or break.

⑨ Rec Out

Press the Rec Out button to output to a recording component for recording purposes. After pressing the Rec Out button, press one of the input source selector buttons within 8 seconds to select the component to record to. When one is selected, the indicator above that button will light in red. To record from the same input source that you are using (that is selected for the main zone), press the Rec Out button twice in succession.

Note:
The Rec Out and Zone 2 buttons use the same circuit and therefore cannot be used at the same time.
When Rec Out is selected, nothing is output from Zone 2.

⑩ Zone 2

The RDC-7 includes a second signal path separate from the main one that can be used for a remote zone (Zone 2) or for making recordings. By connecting an additional amplifier or other video equipment to the Zone 2 outputs, you can output to a separate room an input source that is different from that being used in the main room. This allows you to watch one program in one room while somebody else is watching a different program in another.
Press the Zone 2 button to enable output to the ZONE 2 outputs. After pressing the Zone 2 button, press one of the input source selector buttons within 8 seconds to select the input source for the remote zone. When one is selected, the indicator above that button will light in green.

Front panel facilities

To use the same input source for the both the main and remote zones, press the Zone 2 button twice in succession.

Note:
The Rec Out and Zone 2 buttons use the same circuit and therefore cannot be used at the same time.
when Zone 2 is selected, the currently selected input source is output from the recording terminal.

⑪ Off

When not using either Rec Out or Zone 2, press that button and then press the Off button to turn off the signal. If the Rec Out or Zone 2 signal is turned on and the connected component is not turned on, the electric signal will still be sent through the circuitry and the excess load may cause deterioration of the audio signal.

⑫ ◄DSP►

Press these buttons to scroll through the listening modes and set a new one for the input source you are currently listening to. For each different input signal, different listening modes are possible.

⑬ Dimmer (other than European models)

Press to set the brightness of the front display. There are 4 settings available: normal, dark, very dark, and off.

¥ The dimmer control for the front display can be performed at the remote controller.

⑬ RT/PTY/TP (European models only)

This button is only available on European models. Use this button to help tune into the Radio Data System (RDS) for FM broadcasting. RDS was developed within the European Broadcasting Union (EBU) and is available in most European countries. Each time the button is pressed, the display changes from RT (radio text) to PTY (program type) to TP (traffic program) and then back to RT again.

⑭ ◄Tuning►

Use these buttons to change the tuner frequency. The tuner frequency is displayed in the front display and it can be changed in 50 kHz increments for FM and 9 kHz increments for AM. When a station is tuned into, Ò> <Óor Ò► ◄Ówill appear in the front display.

When FM is selected, you can hold down one of the tuning buttons and then release it to activate the auto-search feature. It will search for a station in the direction of the button you pressed and stop when it tunes into one.

⑮ ◄Preset►

When AM or FM is selected as the input source, press one of these buttons to jump to a radio station that you preset using the MEMORY button. Pressing the right button moves from the most recently preset station to older ones, and pressing the left button moves in the reverse order.

⑯ FM Mode

If you are listening to an FM radio station in stereo and the sound cuts out or there is a great deal of noise, then press this button. The ÒMONO Ódisplay will appear and the output will change to mono. Though you will not hear the audio in stereo, this may stop the sound from cutting out and reduce excess noise.

⑰ Memory

This button only operates when FM or AM is selected as the input source. This button allows you to preset frequencies for stations when using the FM/AM tuner. You can preset up to 40 stations (or frequencies) to be used with the PRESET buttons.

⑱ Menu, ▲, ▼, Enter, ◄, ►, Exit

These buttons are used with the On Screen Display (OSD) menu. They also perform the same functions as the OSD MENU, ▲ (upper edge of ENTER button), ▼ (lower edge of ENTER button), ◄ (left edge of ENTER button), ► (right edge of ENTER button), ENTER, and EXIT RETURN buttons on the remote controller.

Menu: Press to bring up the OSD menu.
Exit: Press to exit the OSD menu when at the Menu Screen, or move to one screen previous to the one that is displayed if at any other screen.
▲ and ▼: When selecting items in the OSD Menu, press these buttons to move the on-screen cursor (or the highlighted portion) upward and downward.
◄ and ►: When setting parameters in the OSD menu, press these buttons to select parameter values or modes.
Enter: Press to display the screen for the selected item in the OSD Menu.

Note for European models:
These buttons are also used to set programs and finish scans when performing a PTY or TP scan with the RDS broadcasts.

⑲ PHONES

This is a standard stereo jack for connecting stereo headphones. The audio for the front right and left speakers are sent to the headphone speakers. When the headphones are plugged in, the listening mode automatically changes to stereo and output to the speakers is stopped.

Front panel display

❶ **Listening mode or digital input format indicators**

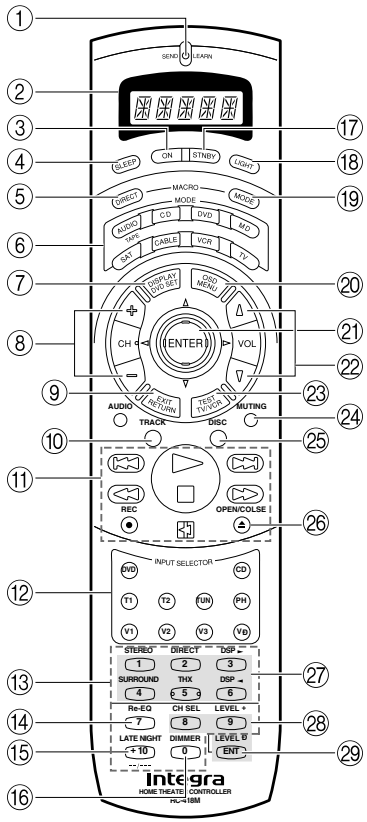
❷ **Multi function display**

❸ **Sleep indicator**

❹ **Input source format indicator**

❺ **Video display**

Remote controller



① **SEND/LEARN indicator**
Lights red when a signal is emitted from the remote controller.

② **LCD display**
Displays the input and operating status.

③ **ON**
Turns on the RDC-7.

④ **SLEEP**
Sets the sleep function.

⑤ **DIRECT MACRO**
Programming or running a direct macro function.

⑥ **MODE buttons**
Sets the remote controller into the mode for the device corresponding to the button pressed.

⑦ **DISPLAY**
Changes the display.

DVD SET
Brings up the DVD setup menu when the DVD mode is selected.

⑧ **CH +/–**
Selects the tuner preset stations.

⑨ **EXIT**
Set the new settings and return to the previous menu screen.

RETURN
Returns to the DVD menu screen when the DVD mode is selected.

⑩ **TRACK**
Selects a CD track when the CD mode is selected.

⑪ **CD/TAPE/DVD/MD operation buttons**
Operates other Onkyo and Integra components.

⑫ **Input Selector buttons**
Selects an input source.
DVD: DVD, CD:CD,T1:Tape1, T2:Tape2, TUN:AM/FM, PH:Phono, V1:Video1, V2:Video2, V3:Video3, V-: Use this button in conjunction with a numeric button to select Video 1 through 5.

⑬ **1-9, 0, +10**
Numeric key. The +10 button changes the value of the 10's digit.

⑭ **Re-EQ**
Selects the Re-EQ mode.

⑮ **LATE NIGHT**
Selects the late night mode.

⑯ **DIMMER**
Adjusts the display brightness.

⑰ **STNBY**
Turns the RDC-7 in standby. Be aware that pressing the STNBY button only places the RDC-7 in standby and does not turn the power completely off.

⑱ **LIGHT**
Illuminates the buttons.

⑲ **MODE MACRO**
Programming or running a macro function.

⑳ **OSD**
Brings up the OSD menu.

MENU
Displays the menu when the DVD mode is selected.

㉑ **ENTER/cursor**

㉒ **VOL ▵/▿**
Adjusts the volume.

㉓ **TEST**
Outputs a test tone for setting speaker levels.

TV/VCR
Used to program the signals from remote controllers for other components. Program the TV/VCR switching mode.

㉔ **MUTING**
Activate the mute function.

㉕ **DISC**
Selects a disc in the CD changer when the CD mode is selected.

㉖ **OPEN/CLOSE**
Open and close the front door.

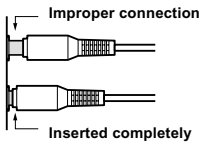
㉗ **Listening mode buttons**
Pressing these buttons to change the listening mode directly.

㉘ **Speaker output level setting buttons**
Use to set the speaker output levels.

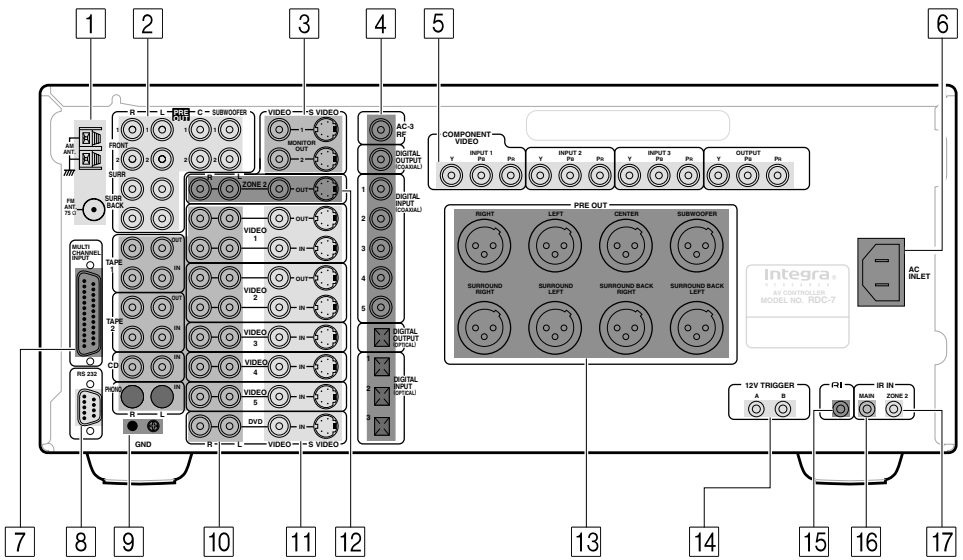
㉙ **ENT**
Enters numerical values and settings when either the MD or DVD mode is selected.

Rear panel facilities

Here is an explanation of the terminals found on the rear of the RDC-7 and how they are used. Before connecting your audio and video components, be sure to read this section carefully and then proceed to the explanations on how to connect each individual component.



- **Be sure to always refer to the instructions that came with the component that you are connecting.**
- **Do not plug in the power cord until all connections have been made.**
- **For input jacks, red connectors (marked R) are used for the right channel, white connectors (marked L) are used for the left channel, and yellow connectors (marked V) are used for video connection.**
- **Insert all plugs and connectors securely. Improper connections can result in noise, poor performance, or damage to the equipment.**
- **Do not bind audio/video connection cables with power cords and speaker cables. Doing so may adversely affect the picture and sound quality.**

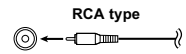


1 ANTENNA

These jacks are for connecting the FM indoor antenna and AM loop antenna that are supplied with the RDC-7.

2 PRE OUT (RCA type)

These jacks are for connecting power amplifiers. If the jacks on your power amplifier are RCA type jacks, connect them here. Two terminals are provided for each of the front left, center, and right channels. The same signal is output from both terminals 1 and 2.

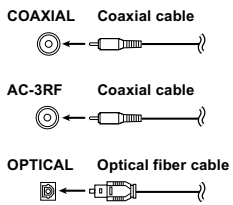


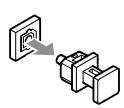
3 MONITOR OUT

There are 2 monitor outputs and each one includes both composite video and S-video configurations. When connecting two video monitors or televisions, be aware that the OSD interface can only be used with MONITOR OUT 1 (OSD will not be displayed on the video monitor connected to MONITOR OUT 2).

4 DIGITAL INPUT/OUTPUT (coaxial, optical, and input-only AC-3RF)

These are the digital audio inputs and outputs. There are 5 digital inputs with coaxial jacks, 3 with optical jacks, and 1 AC-3RF input. The inputs accept digital audio signals from a compact disc, LD, DVD, or other digital source component. For digital output, there is 1 coaxial output and 1 optical output. The digital outputs can be connected to MD recorders, CD recorders, DAT decks, or other similar components.



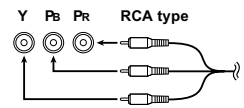


Optical digital input terminal
An optical digital input terminal is equipped with a protection cap. When connecting, remove this cap. When not using, put the cap back on the terminal.

- When using the digital inputs and outputs, make sure to also connect the analog connections whenever possible.
- When using one of the optical input or output jacks, remove the protective cap and keep it safely. When the jack is not used, replace the protective cap.
- When using an optical input or output jack, always use an optical fiber cable.

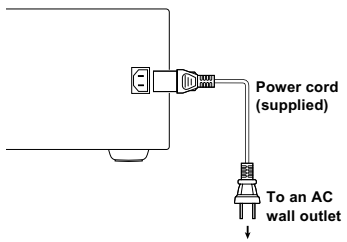
5 COMPONENT VIDEO INPUT/OUTPUT

If your DVD player or other device has component video connectors, be sure to connect them to these component video connectors on the RDC-7. The RDC-7 has three component video input connectors to obtain the color information (Y, P_B, P_R) directly from the recorded DVD signal or other video component and one component video output connector to output it directly into the matrix decoder of the display device. By sending the pure DVD component video signal directly, the DVD signal forgoes the extra processing that normally would degrade the image. The result is vastly increased image quality, with incredibly lifelike colors and crisp detail.



6 AC INLET

Plug the supplied power cord into this AC INLET and then into the power outlet on the wall.

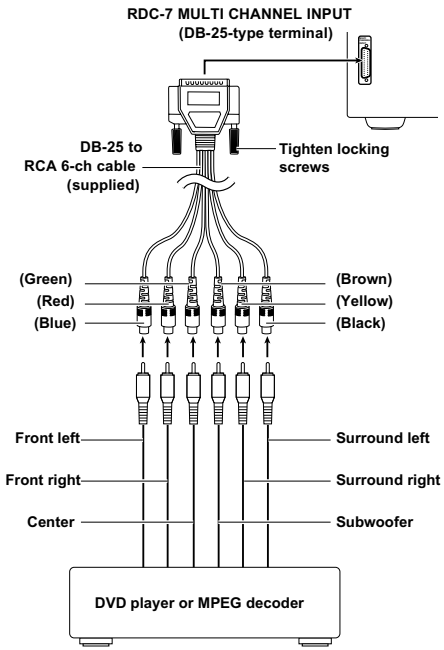


- Do not use a power cord other than the one supplied with the RDC-7. The power cord supplied is designed for use with the RDC-7 and should not be used with any other device.
- Never have the power cord disconnected from the RDC-7 while the other end is plugged into the wall outlet. Doing so may cause an electric shock. Always connect by plugging into the wall outlet last and disconnect by unplugging from the wall outlet first.

Rear panel facilities

7 MULTI CHANNEL INPUT

By connecting a DVD player, MPEG decoder, or other component that has a multi channel port, you can playback the audio with 5.1 channel or 7.1 channel output. So, be sure to prepare a cable that can properly connect the RDC-7 to the peripheral device.



The MULTI CHANNEL INPUT is a DB-25 port and the RDC-7 is equipped provided with a DB-25-to-RCA 6-channel cable. When making a multi-channel connection to a DVD player or MPEG decoder, connect the DB-25 end of the cable to the MULTI CHANNEL INPUT port on the RDC-7 and RCA-type ends to the ends of the cables connected to the other component. The channel colors are shown below.

Front left (Blue)
Front right (Red)
Center (Green)
Surround left (Black)
Surround right (Yellow)
Subwoofer (Brown)

If the DVD player or MPEG decoder that you are connecting to is provided with DB-25-to-DB-25 cable, then connect that directly to the RDC-7 and do not use the cable supplied with the RDC-7.
When connecting the cable, be sure to secure the locking screws on the DB-25 connectors.

8 RS 232

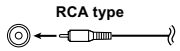
The RS 232 port is to be used in conjunction with an external controller to control the operation of the RDC-7 by using an external device. The RS 232 port may also be used in the future to update the operating software of the RDC-7 so that it will be able to support new digital audio formats and the like as they are introduced.

9 GND

Use this GND terminal for connecting the ground (or earth) wire if a turntable is connected.

10 AUDIO IN/OUT

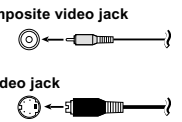
These are the analog audio inputs and outputs. There are 10 audio inputs (6 of which are linked to video inputs) and 4 audio outputs (2 of which are linked to video outputs). The audio jacks are nominally labeled for cassette tape decks, compact disc players, turntables, and DVD players. To the audio jacks for VIDEO 1 to 5, connect the audio output from VCRs, LD players, and other video components. The audio inputs and outputs require RCA-type connectors.



- ¥ When using the PHONO jacks, remove the caps that cover then and store them safely where they will not be lost. Whenever the PHONO jacks are not in use, replace the caps on them.
- ¥ When connecting a VCR or other video component, make sure you connect the audio and video leads together (i.e., both to VIDEO 3).
- ¥ With LD players that have an AC-3RF terminal, connect the audio source to the audio inputs of VIDEO 4 because only it supports the AC-3RF settings during digital setup.
- ¥ The RDC-7 is designed for use with turntables that use moving magnet cartridges.

11 VIDEO IN/OUT

These are the video inputs and outputs. There are 6 video inputs and 2 video outputs and each one includes both composite video and S-video configurations. Connect VCRs, LD players, DVD players, and other video components to the video inputs. S-video sources can be viewed via the S-video or composite outputs, while composite sources can only be viewed through the composite output.
The 2 video output channels can be used to be connected to video tape recorders for making recordings.



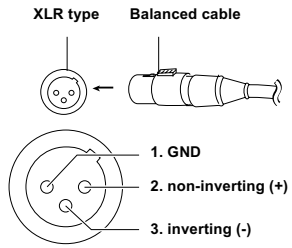
- ¥ When connecting a VCR or other video component, make sure you connect the audio and video leads together (i.e., both to VIDEO 3).
- ¥ With LD players that have an AC-3RF terminal, connect the video source to the video inputs of VIDEO 4 because only it supports the AC-3RF settings during digital setup.

12 ZONE 2

These are the audio and video output jacks for the remote zone (Zone 2). Use these outputs to connect the remote zone.
These outputs are activated by the Zone 2 button on the front panel.

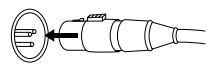
13 PRE OUT (Balanced type)

These jacks are for connecting power amplifiers. If the jacks on your power amplifier are XLR (balanced) type jacks, connect them here. The pin assignments for these terminals are shown below.

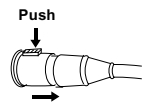


These pin assignments conform to the standards made by the Audio Engineering Society. Check the instruction manual that came with your power amplifier and verify that the input pin assignments are compatible with those for the RDC-7.

1. Connecting the output terminal
Match the pins and insert the terminal until you hear a Òclick. ÓEnsure that it is secure by gently pulling it.



2. Disconnecting tha output terminal
Pull out the cable (in the direction indicated by the arrow) while holding down the connection cable button.

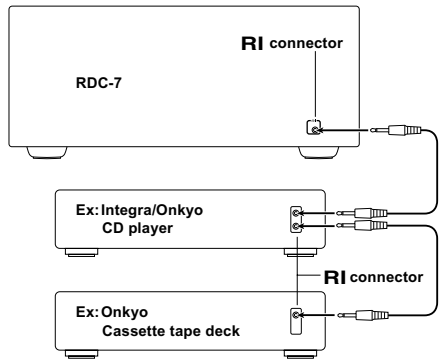


14 12V TRIGGER

This is a 12-volt output terminal so that the RDC-7 can control other external devices. For other devices that have an input terminal of the same kind, you can connect it to this terminal with 1/8-inch mini-jack cable so that its power is turned on when you press an input source button. The RDC-7 is equipped with two 12-volt trigger terminals and each supplies a current of 100 mA. When you connect to either of these terminals, make the appropriate settings in the OSD menu.The initial settings are ÒA: OnÓand ÒB: Off,Óso if you are only connecting to A, these settings will not need to be changed.

15 RI (RI)

By connecting the RI connector as shown in the diagram below, you can use the RC-418M remote controller to operate Integra/Onkyo cassette tape decks and compact disc players that also have Integra/Onkyo's RI connectors. Simply connect a remote control cable from this connector to the RI connector of the cassette tape deck or compact disc player. An RI remote control cable with a 3.5-mm (1/8-inch) miniature two-conductor plug comes with every cassette tape deck and compact disc player that has an RI connector.



- ¥ For remote control operation, the audio connection cables must also be connected.
- ¥ The RC-418M remote controller does not support turntables.
- ¥ If the connected component has two RI connectors, you can use either one to connect to the RDC-7. The other one can be used to daisy chain with another component.
- ¥ For Integra DVD or MD players, you can control them by simply pointing the RC-418M controller directly at the component.

16 IR IN MAIN

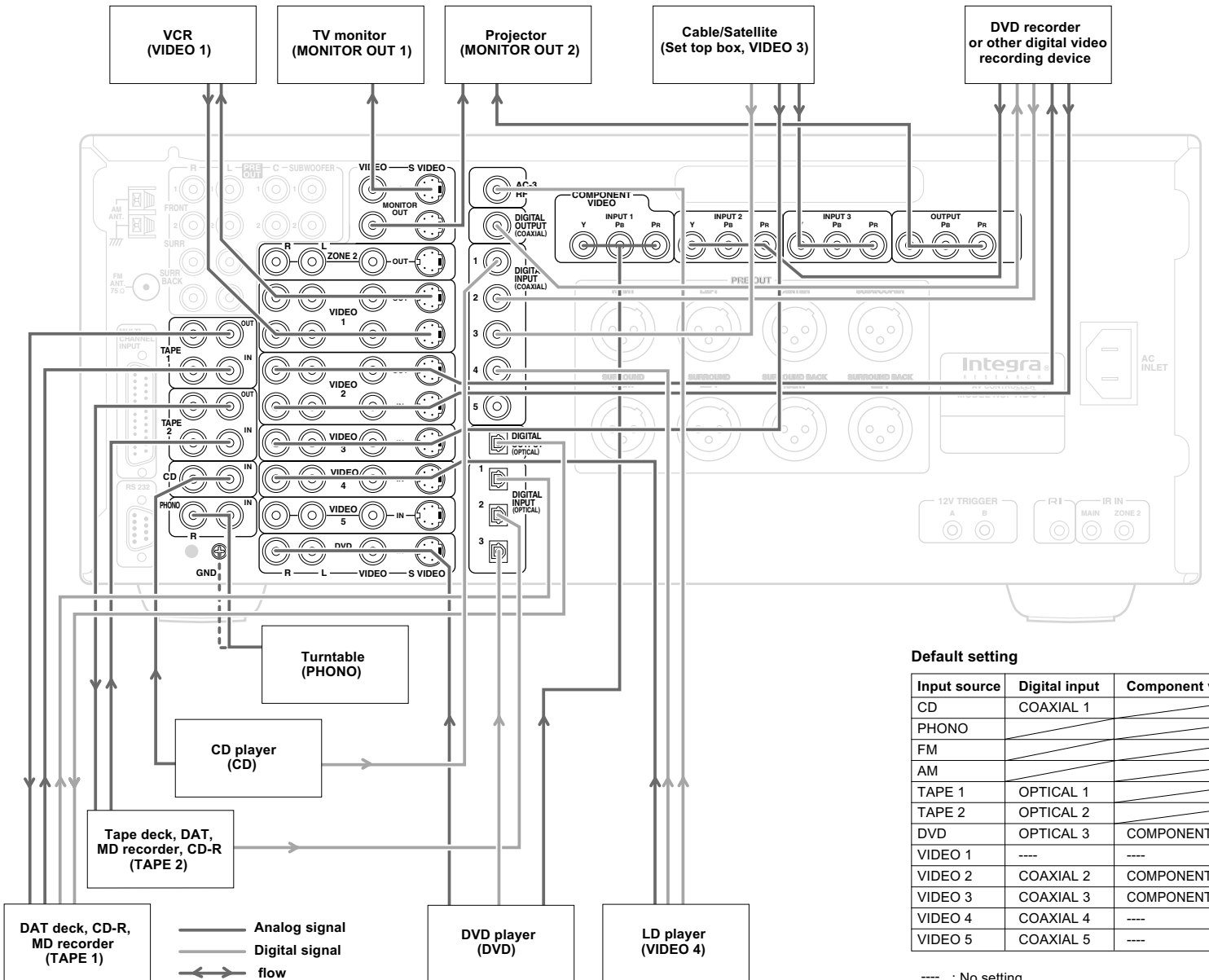
If the RDC-7 is located inside a rack or cabinet that will not allow infrared beams to reach the IR sensor, you will need to connect a remote sensor* to this input to be able to use the remote controller. Then install the remote sensor in an unblocked location where you can easily point the remote controller.
* An optional remote sensor kit is required.

17 IR IN ZONE 2

This jack allows you to connect a multiroom system kit so that you can use the remote controller while you are in the remote zone (Zone 2), which may be far separated from the RDC-7.

- * **To be able to use the remote controller in the remote zone (Zone 2), you must connect one of the following (sold separately):**
- ¥ Integra's Multi-Room System Kit (IR Remote Controller Extension System).
- ¥ A multiroom A/V distribution and control system from Niles®, Xantech®, or the like.

Example of how to connect your equipment



Standard connections

Here is explanation of how to connect the main components to the RDC-7 in the standard manner. There are many ways that any one component can be connected, and it is up to you to decide which method best fits your situation. The directions given here are only one option and should only be thought of as such. It is best to fully understand the nature of each connector and terminal as well as each of your components and their features to ascertain which method of connection is best.

- **Be sure to always refer to the instruction manual that came with the component that you are connecting.**
- **Do not plug in the power cord until all connections have been made.**
- **For input jacks, red connectors (marked R) are used for the right channel, white connectors (marked L) are used for the left channel, and yellow connectors (marked V) are used for video connection.**
- **Insert all plugs and connectors securely. Improper connections can result in noise, poor performance, or damage to the equipment.**
- **Do not bind audio connection cables with power cords and speaker cables. Doing so may adversely affect the sound quality.**

Connecting power amplifiers:
Speaker configuration and placement:
Radio antenna:
Enjoying the RDC-7 from a remote room (Zone 2):

Default setting

Input source	Digital input	Component video
CD	COAXIAL 1	
PHONO		
FM		
AM		
TAPE 1	OPTICAL 1	
TAPE 2	OPTICAL 2	
DVD	OPTICAL 3	COMPONENT VIDEO 1
VIDEO 1	----	----
VIDEO 2	COAXIAL 2	COMPONENT VIDEO 2
VIDEO 3	COAXIAL 3	COMPONENT VIDEO 3
VIDEO 4	COAXIAL 4	----
VIDEO 5	COAXIAL 5	----

---- : No setting
: No applicable

Example of how to connect your equipment

Connecting your audio components

Below is an example of how you can connect your audio components to the RDC-7.

1. Connecting a turntable

Using an RCA-type audio connection cable, connect the output terminal on the turntable to the PHONO IN jacks on the RDC-7. Make sure that you properly connect the left channel to the L jack and the right channel to the R jack.

Note:
The RDC-7 is designed for use with moving magnet cartridges. For proper operation, connect a ground (or earth) wire to the GND terminal. For some turntables, however, connecting the ground wire may cause increased noise, and in such a case, a ground wire is not necessary and should not be connected.

2. Connecting a compact disc player

Using an RCA-type audio connection cable, connect the output terminal on the compact disc player to the CD IN jacks on the RDC-7. Make sure that you properly connect the left channel to the L jack and the right channel to the R jack.
If the compact disc player has a digital output jack as well, be sure to also connect it to either a DIGITAL INPUT (COAXIAL) or DIGITAL INPUT (OPTICAL) jack on the RDC-7 depending on the type of connector on the compact disc player.
With the initial settings of the RDC-7, the CD input source is set for digital input at the COAXIAL 1 jack. If the digital connection is made at a different jack, this must be changed at the OSD Menu: Input Setup → Digital Setup → Digital Input .

3. Connecting a cassette tape deck, MD recorder, DAT deck, or CD recorder

Using an RCA-type audio connection cable, connect the output terminals (PLAY) of the device to the TAPE 2 IN jacks on the RDC-7 and the input terminals (REC) to the TAPE 2 OUT jacks. Make sure that you properly connect the left channel to the L jack and the right channel to the R jack.
If the device has a digital output jack as well, be sure to also connect it to either a DIGITAL INPUT (COAXIAL) or DIGITAL INPUT (OPTICAL) jack on the RDC-7 depending on the type of connector on the device.
With the initial settings of the RDC-7, the TAPE 2 input source is set for digital input at the OPTICAL 2 jack. If the digital connection is made at a different jack, this must be changed at the OSD Menu: Input Setup → Digital Setup → Digital Input .
If the device also has a digital input jack, it can be connected to the DIGITAL OUTPUT (COAXIAL) or DIGITAL OUTPUT (OPTICAL) jack on the RDC-7 for recording of the signal from the input source selected at the RDC-7.

4. Connecting an MD recorder, DAT deck, or CD recorder

Using an RCA-type audio connection cable, connect the output terminals (PLAY) of the device to the TAPE 1 IN jacks on the RDC-7 and the input terminals (REC) to the TAPE 1 OUT jacks. Make sure that you properly connect the left channel to the L jack and the right channel to the R jack.
If the device has a digital output jack as well, be sure to also connect it to either a DIGITAL INPUT (COAXIAL) or DIGITAL INPUT (OPTICAL) jack on the RDC-7 depending on the type of connector on the device.
With the initial settings of the RDC-7, the TAPE 1 input source is set for digital input at the OPTICAL 1 jack. If the digital connection is made at a different jack, this must be changed at the OSD Menu: Input Setup → Digital Setup → Digital Input.
If the device also has a digital input jack, it can be connected to the DIGITAL OUTPUT (COAXIAL) or DIGITAL OUTPUT (OPTICAL) jack on the RDC-7 for recording of the signal from the input source selected at the RDC-7.

Connecting your video components

Below is an example of how you can connect your video components to the RDC-7.

The flow of the video signals is as follows: the signal that comes in from VIDEO IN is sent to VIDEO OUT, the signal that comes in from S-VIDEO IN is sent to S-VIDEO OUT and VIDEO OUT, and the signal that comes in from COMPONENT VIDEO IN is sent to COMPONENT VIDEO OUT.
If only the video connection for the MONITOR OUT is made, even if the input from each source component is through a component video connection, the picture will not appear. If only the S-video connection for the MONITOR OUT is made, the picture will not appear.

5. Connecting a DVD player

Using an RCA-type video connection cable, connect the video output terminal (composite) on the DVD player to the DVD VIDEO IN jack on the RDC-7. If there is an S-video output terminal on the DVD player, connect it to the DVD S VIDEO IN jack using an S-video cable. If the DVD player has component video outputs, connect them to one of the COMPONENT VIDEO INPUT jacks.
Using an RCA-type audio connection cable, connect the audio output terminal on the DVD player to the audio DVD IN jacks on the RDC-7. Make sure that you properly connect the left channel to the L jack and the right channel to the R jack.
If the DVD player has a digital output jack as well, be sure to also connect it to either a DIGITAL INPUT (COAXIAL) or DIGITAL INPUT (OPTICAL) jack on the RDC-7 depending on the type of connector on the DVD player.
With the initial settings of the RDC-7, the DVD input source is set for digital input at the OPTICAL 3 jack. If the digital connection is made at a different jack, this must be changed at the OSD Menu: Input Setup → Digital Setup → Digital Input .

6. Connecting a LD player

Using an RCA-type video connection cable, connect the video output terminal (composite) on the LD player to the VIDEO 4 IN jack on the RDC-7. If there is an S-video output terminal on the LD player, connect it to the S VIDEO 4 IN jack using an S-video cable.
If the LD player has an AC-3RF output, connect it to the AC-3RF jack on the RDC-7. If this connection is made, ÒAC-3RFÓmust be set in the OSD Menu: Input Setup Digital Setup → Digital Format.
Using an RCA-type audio connection cable, connect the audio output terminal on the LD player to the audio VIDEO 4 IN jacks on the RDC-7. Make sure that you properly connect the left channel to the L jack and the right channel to the R jack.
If the LD player has a digital output jack as well, be sure to also connect it to either a DIGITAL INPUT (COAXIAL) or DIGITAL INPUT (OPTICAL) jack on the RDC-7 depending on the type of connector on the LD player.
With the initial settings of the RDC-7, the VIDEO 4 input source is set for digital input at the COAXIAL 4 jack. If the digital connection is made at a different jack, this must be changed at the OSD Menu: Input Setup → Digital Setup → Digital Input.

7. Connecting a video cassette recorder

Using an RCA-type video connection cable, connect the video output terminal (composite) on the video cassette recorder to the VIDEO 1 IN jacks on the RDC-7 and video input terminal to the VIDEO 1 OUT jacks. If there is an S-video input/output terminal on the video cassette recorder, connect it to the S VIDEO 1 IN/OUT jack using an S-video cable. If the video cassette recorder has component video outputs, connect them to one of the COMPONENT VIDEO INPUT jacks.
Using an RCA-type audio connection cable, connect the audio output terminal on the video cassette recorder to the same VIDEO 1 IN audio jacks on the RDC-7 and audio input terminal to the VIDEO 1 OUT audio jacks. Make sure that you properly connect the left channel to the L jack and the right channel to the R jack.

8. Connecting a satellite tuner or television

Using an RCA-type video connection cable, connect the video output terminal (composite) on the satellite tuner or television to the VIDEO 3 IN jacks on the RDC-7. If there is an S-video output terminal on the satellite tuner or television, connect it to the S VIDEO 3 IN jack using an S-video cable. If the satellite tuner or television has component video outputs, connect them to one of the COMPONENT VIDEO INPUT jacks.
Using an RCA-type audio connection cable, connect the audio output terminal on the satellite tuner or television to the same VIDEO 3 IN audio jacks on the RDC-7. Make sure that you properly connect the left channel to the L jack and the right channel to the R jack.
If the satellite tuner or television has a digital output jack as well, be sure to also connect it to either a DIGITAL INPUT (COAXIAL) or DIGITAL INPUT (OPTICAL) jack on the RDC-7 depending on the type of connector on the set top box or television.
With the initial settings of the RDC-7, the VIDEO 3 input source is set for digital input at the COAXIAL 3 jack. If the digital connection is made at a jack different from the initial settings, this must be changed at the OSD Menu: Input Setup → Digital Setup → Digital Input.

9. Connecting a DVD recorder or other digital video recording device

Using an RCA-type video connection cable, connect the video output terminal (composite) on the device to the VIDEO 2 IN jacks on the RDC-7 and video input terminal to the VIDEO 1 OUT jacks. If there is an S-video input/output terminal on the device, connect it to the S VIDEO 2 IN/OUT jack using an S-video cable. If the device has component video outputs, connect them to one of the COMPONENT VIDEO INPUT jacks.
Using an RCA-type audio connection cable, connect the audio output terminal on the device to the same VIDEO 2 IN audio jacks on the RDC-7 and audio input terminal to the VIDEO 1 OUT audio jacks. Make sure that you properly connect the left channel to the L jack and the right channel to the R jack.
If the device has a digital output jack as well, be sure to also connect it to either a DIGITAL INPUT (COAXIAL) or DIGITAL INPUT (OPTICAL) jack on the RDC-7 depending on the type of connector on the device.
With the initial settings of the RDC-7, the VIDEO 2 input source is set for digital input at the COAXIAL 2 jack. If the digital connection is made at a jack different from the initial settings, this must be changed at the OSD Menu: Input Setup → Digital Setup → Digital Input.
If the device also has a digital input jack, it can be connected to the DIGITAL OUTPUT (COAXIAL) or DIGITAL OUTPUT (OPTICAL) jack on the RDC-7 for recording of the signal from the input source selected at the RDC-7.

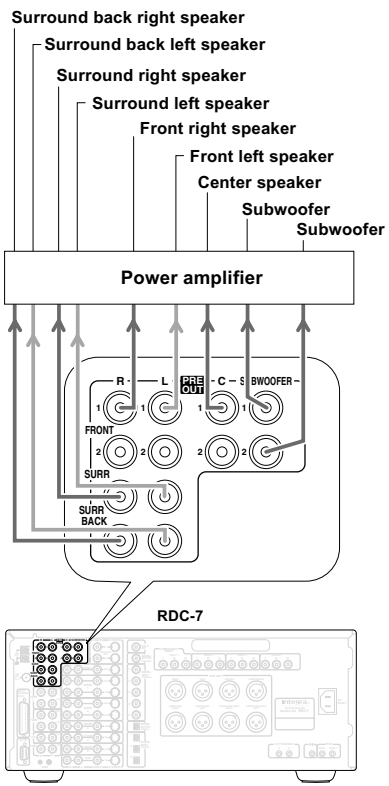
10. Connecting a television monitor or projector

Using an RCA-type video connection cable, connect the video input terminal (composite) on the monitor to one of the MONITOR OUT jacks on the RDC-7. If there is an S-video input terminal on the monitor, connect it to the S VIDEO MONITOR OUT jack using an S-video cable. If the device has component video inputs, connect them to the COMPONENT VIDEO OUTPUT jacks.
Note that the OSD Menu will not be displayed on the monitor connected to MONITOR OUT 2. This allows you to connect large screens or projectors to MONITOR OUT 2 and use a smaller television connected to MONITOR OUT 1 just to make settings in the OSD Menu.

Connecting power amplifiers

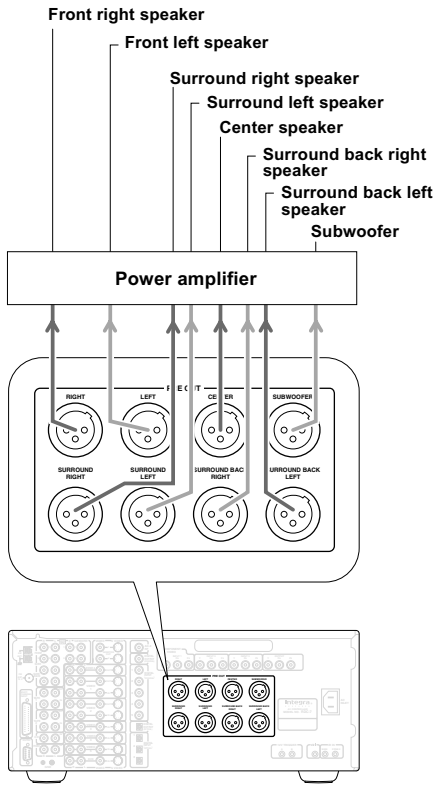
Connecting power amplifiers with RCA type connector

Connect your power amplifier to the PRE OUT jacks on the RDC-7. If the jacks on your power amplifier are RCA type jacks, connect them to the jacks shown in the diagram given below. Two terminals are provided for each of the front left, center, and right channels. The same signal is output from both terminals 1 and 2.



Connecting power amplifiers with XLR type connector

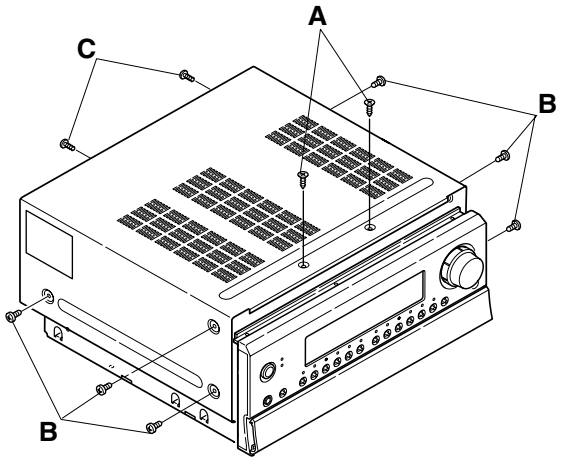
Connect your power amplifier to the PRE OUT jacks on the RDC-7. If the jacks on your power amplifier are XLR (balanced) type jacks, connect them to the jacks shown in the diagram given below.



DISASSEMBLING PROCEDURES

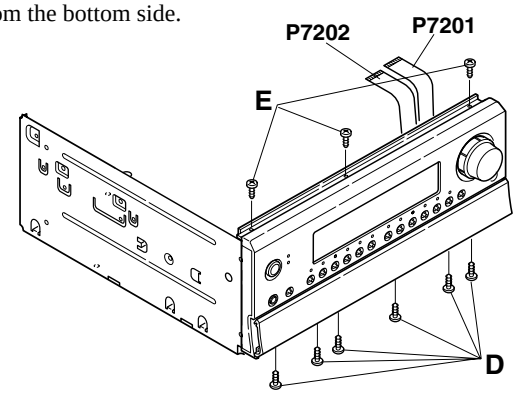
1. Top cover

Remove two screws A holding the top cover and bracket.
Remove six screws B holding the top cover and chassis.
Remove two screws C holding the top cover and the rear panel.
Lift up the top cover and remove it.



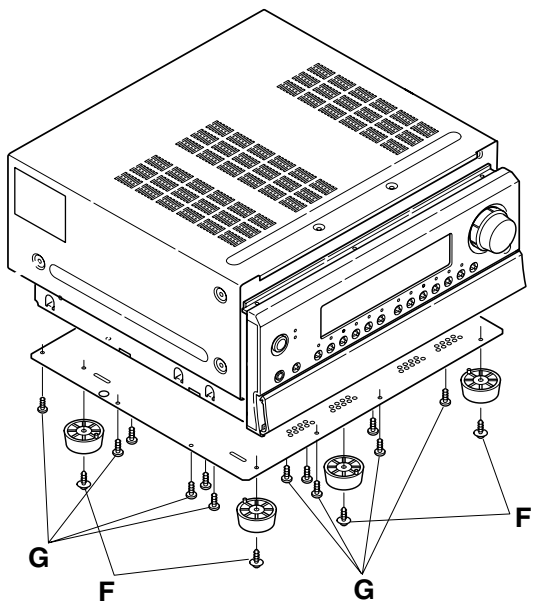
2. Front panel assembly

Remove the top cover.
Disconnect two FFCs on the sockets of P7201B and P7202A.
Remove three screws D holding the front panel and chassis from the top side.
Remove six screws E holding the front panel and chassis from the bottom side.



3. Bottom board

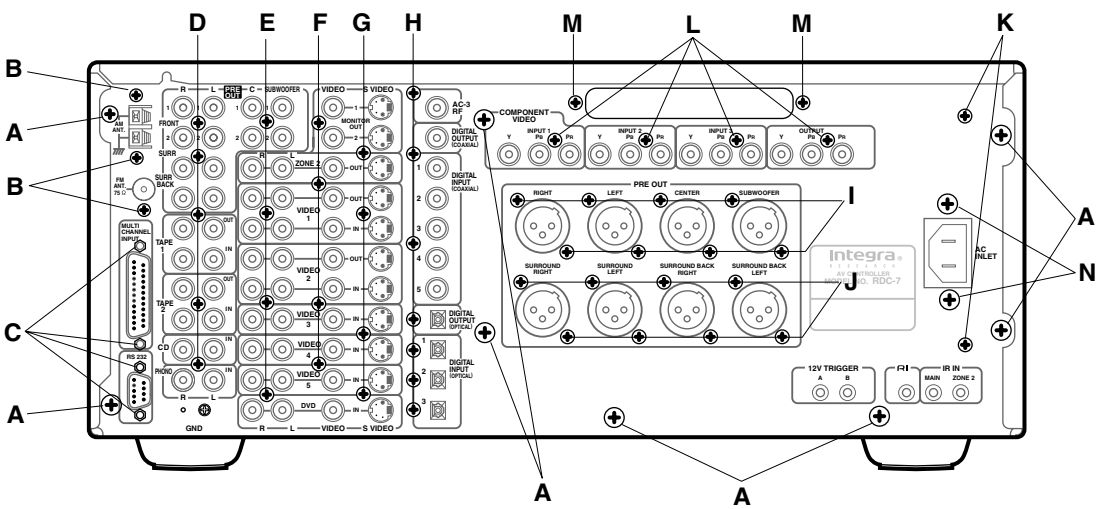
Remove four screws F holding the leg and chassis.
Remove twelve screws G holding the bottom board and chassis.



4. Rear panel

When PC board assembly are removed, remove the rear panel.
Remove the 8 screws A holding the rear panel and the chassis.
Remove the four special screws C.
Remove the 46 screws D to K.
Remove the two screws N.

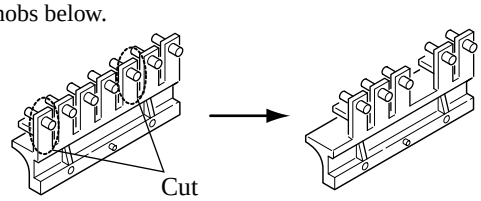
A : ATTB+8C(BC) (Part No.838440089) x 8 Chassis
B : 3TTB+6B(BC) (Part No.838440068) x 3 Tuner unit
C : Special screw (This screw is included to Terminal) x 4 Multi channel input PC board
D : 3TTB+8B(BC) (Part No.838430088) x 5 Input selector PC board
E : 3TTB+8B(BC) (Part No.838430088) x 4 Input/Output terminal PC board
F : 3TTB+8B(BC) (Part No.838430088) x 4 Video terminal PC board
G : 3TTB+8B(BC) (Part No.838430088) x 4 S Video terminal PC board
H : 3TTB+8B(BC) (Part No.838430088) x 7 DSP circuit terminal PC board
I : 3TTB+8B(BC) (Part No.838430088) x 8 XLR jack PC board (1)
J : 3TTB+8B(BC) (Part No.838430088) x 8 XLR jack PC board (2)
K : 3TTB+8B(BC) (Part No.838430088) x 2 Primary circuit PC board
L : 3TTB+8B(BC) (Part No.838430088) x 4 Component video PC board
M : 3TTB+8B(BC) (Part No.838430088) x 2 Cover
N : 3TTB+8B(BC) (Part No.838430088) x 2 Primary circuit PC board



ASSEMBLING PROCEDURES

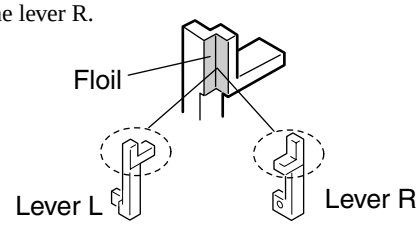
1. Attachment of door knob

When you replace the door knob assembly of lef side, cut the two knobs below.



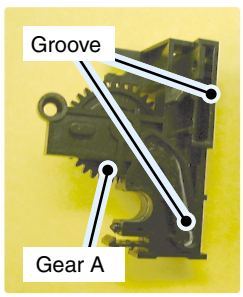
3. Attachment of holders

Apply the floil G-902S (Part No.260447) on the lever L and the lever R.

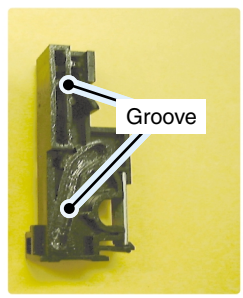


4. Attachment of shaft assembly

Apply Floil on the groove of holders.

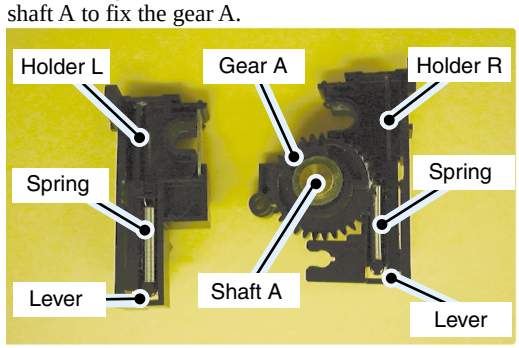


Holder R

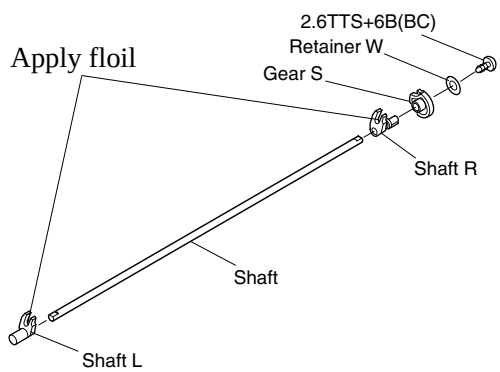


Holder L

Hang the spring from the down side of lever.
Attach the gear A to the holder R, and insert the shaft A to fix the gear A.

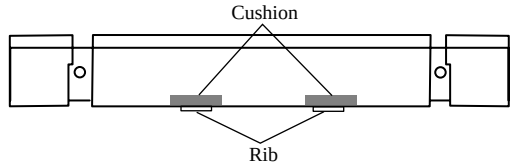


Insert the shaft to the shaft L and the shaft R.

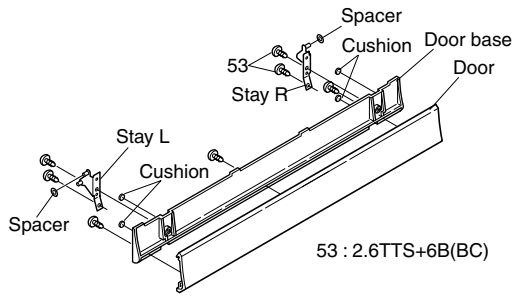


3. Attachment of door

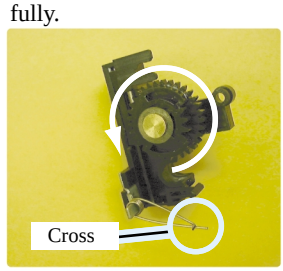
Put the cushions according to the center of rib.



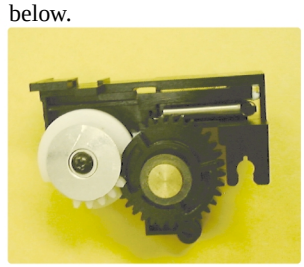
Inlay the door base to the door.
Put the five cushions on the door base.
Attach the stay L and stay R.
Put the spacers on the stay L and the stay R.

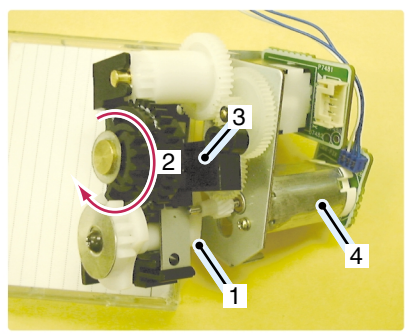


Turn Gear A counter clockwise fully.

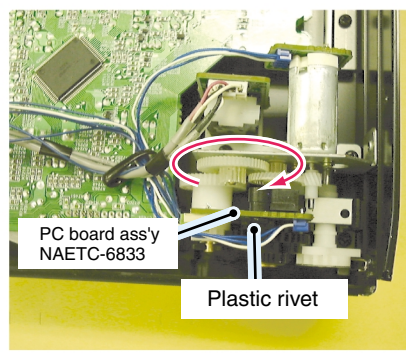


Attach the gear S as shown below.





1. Insert the retainer S.
2. Turn the gear A clockwise fully.
3. Insert the headphone jack to the front panel
4. Attach the motor assembly.
5. Attach the part above on the front panel.



Turn the gear clockwise fully and insert the PC board ass'y (NAETC-6835)
Fix the PC board ass'y by the plastic rivet.

Q8704 : XCS05XL-4VQ100C

Pin Descriptions

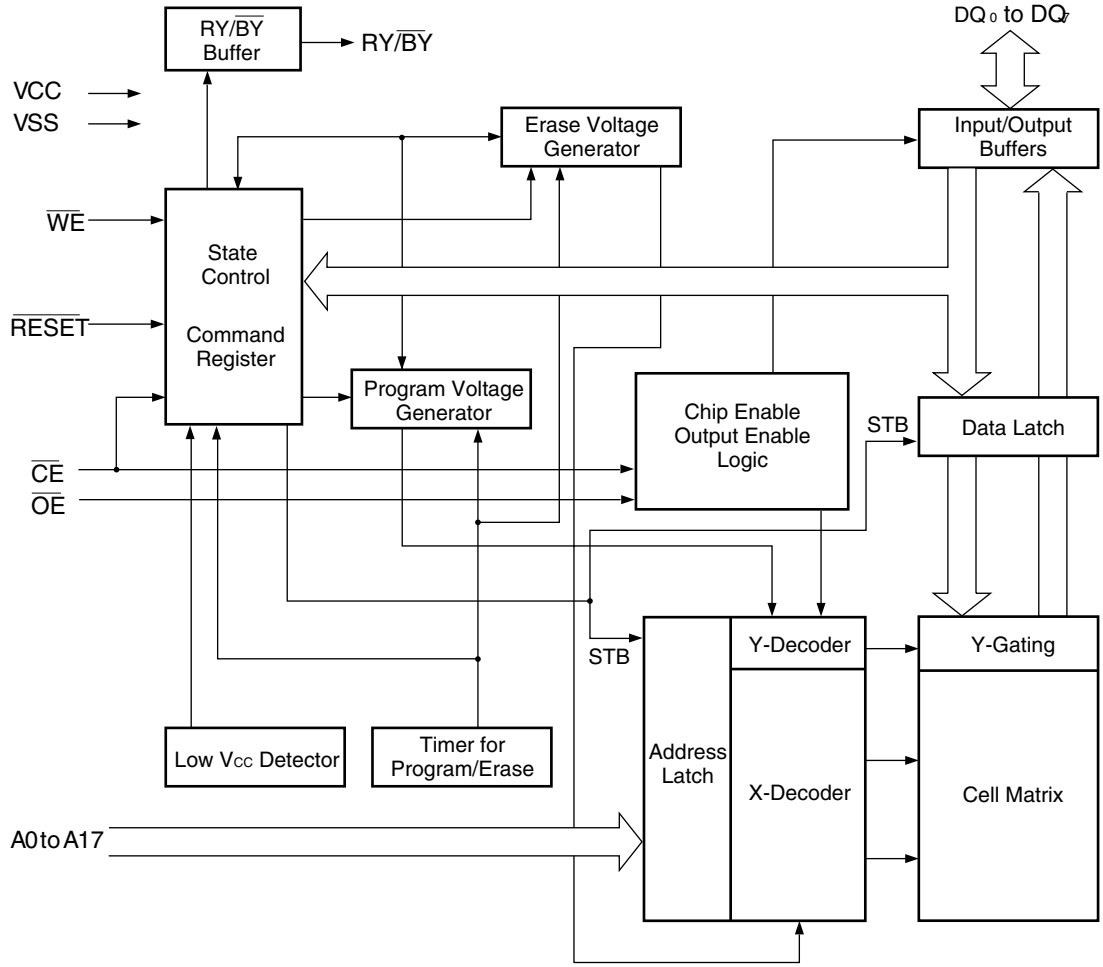
Pin No.	Pin Name	I/O During Config.	I/O After Config.	Pin Description
Permanently Dedicated Pins				
12, 25, 51 63, 75, 89 100	VCC	X	X	Eight or more (depending on package) connections to the nominal +5V supply voltage (+3.3V for Spartan-XL devices). All must be connected, and each must be decoupled with a 0.01 –0.1 µF capacitor to Ground.
1, 11, 23, 38 49, 64, 77, 88	GND	X	X	Eight or more (depending on package type) connections to Ground. All must be connected.
74	CCLK	I or O	I	During configuration, Configuration Clock (CCLK) is an output in Master mode and is an input in Slave mode. After configuration, CCLK has a weak pull-up resistor and can be selected as the Readback Clock. There is no CCLK High or Low time restriction on Spartan/XL devices, except during Readback. See "Violating the Maximum High and Low Time Specification for the Readback Clock" on page 32 for an explanation of this exception.
50	DONE	I/O	O	DONE is a bidirectional signal with an optional internal pull-up resistor. As an output, it indicates the completion of the configuration process. As an input, a Low level on DONE can be configured to delay the global logic initialization and the enabling of outputs. The optional pull-up resistor is selected as an option in the program that creates the configuration bitstream. The resistor is included by default.
52	$\overline{\text{PROGRAM}}$	I	I	$\overline{\text{PROGRAM}}$ is an active Low input that forces the FPGA to clear its configuration memory. It is used to initiate a configuration cycle. When $\overline{\text{PROGRAM}}$ goes High, the FPGA finishes the current clear cycle and executes another complete clear cycle, before it goes into a WAIT state and releases $\overline{\text{INIT}}$. The $\overline{\text{PROGRAM}}$ pin has a permanent weak pull-up, so it need not be externally pulled up to VCC.
24	MODE (Spartan) M0, M1 (Spartan-XL)	I	X	The Mode input(s) are sampled after $\overline{\text{INIT}}$ goes High to determine the configuration mode to be used. During configuration, these pins have a weak pull-up resistor. For the most popular configuration mode, Slave Serial, the mode pins can be left unconnected. For Master Serial mode, connect the Mode/M0 pin directly to system ground.
26	$\overline{\text{PWRDWN}}$	I	I	$\overline{\text{PWRDWN}}$ is an active Low input that forces the FPGA into the Power Down state and reduces power consumption. When $\overline{\text{PWRDWN}}$ is Low, the FPGA disables all I/O and initializes all flip-flops. All inputs are interpreted as Low independent of their actual level. VCC must be maintained, and the configuration data is maintained. $\overline{\text{PWRDWN}}$ halts configuration if asserted before or during configuration, and re-starts configuration when removed. When $\overline{\text{PWRDWN}}$ returns High, the FPGA becomes operational by first enabling the inputs and flip-flops and then enabling the outputs. $\overline{\text{PWRDWN}}$ has a default internal pull-up resistor.
User I/O Pins That Can Have Special Functions				
76	TDO	O	O	If boundary scan is used, this pin is the Test Data Output. If boundary scan is not used, this pin is a 3-state output without a register, after configuration is completed. To use this pin, place the library component TDO instead of the usual pad symbol. An output buffer must still be used.
4 5 6	TDI, TCK, TMS	I	I/O or I (JTAG)	If boundary scan is used, these pins are Test Data In, Test Clock, and Test Mode Select inputs respectively. They come directly from the pads, bypassing the IOBs. These pins can also be used as inputs to the CLB logic after configuration is completed. If the BSCAN symbol is not placed in the design, all boundary scan functions are inhibited once configuration is completed, and these pins become user-programmable I/O. In this case, they must be called out by special library elements. To use these pins, place the library components TDI, TCK, and TMS instead of the usual pad symbols. Input or output buffers must still be used.
28	HDC	O	I/O	High During Configuration (HDC) is driven High until the I/O go active. It is available as a control output indicating that configuration is not yet completed. After configuration, HDC is a user-programmable I/O pin.
30	$\overline{\text{LDC}}$	O	I/O	Low During Configuration ($\overline{\text{LDC}}$) is driven Low until the I/O go active. It is available as a control output indicating that configuration is not yet completed. After configuration, $\overline{\text{LDC}}$ is a user-programmable I/O pin.

Pin Descriptions

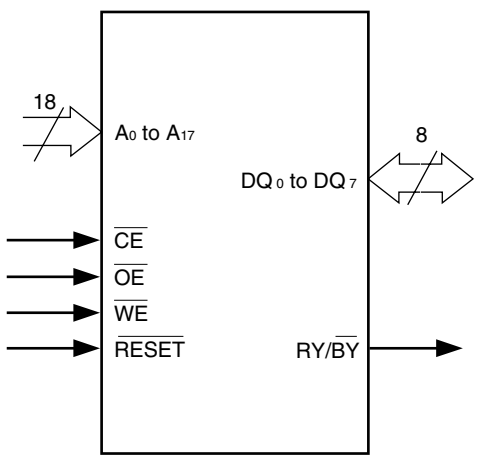
Pin No.	Pin Name	I/O During Config.	I/O After Config.	Pin Description
30	$\overline{LDC}$	O	I/O	Low During Configuration ($\overline{LDC}$) is driven Low until the I/O go active. It is available as a control output indicating that configuration is not yet completed. After configuration, $\overline{LDC}$ is a user-programmable I/O pin.
36	$\overline{INIT}$	I/O	I/O	Before and during configuration, $\overline{INIT}$ is a bidirectional signal. A 1 kΩ - 10 kΩ external pull-up resistor is recommended. As an active Low open-drain output, $\overline{INIT}$ is held Low during the power stabilization and internal clearing of the configuration memory. As an active Low input, it can be used to hold the FPGA in the internal WAIT state before the start of configuration. Master mode devices stay in a WAIT state an additional 30 to 300 µs after $\overline{INIT}$ has gone High. During configuration, a Low on this output indicates that a configuration data error has occurred. After the I/O go active, $\overline{INIT}$ is a user-programmable I/O pin.
2, 27, 54, 79	PGCK1 - PGCK4 (Spartan)	Weak Pull-up	I or I/O	Four Primary Global inputs each drive a dedicated internal global net with short delay and minimal skew. If not used to drive a global buffer, any of these pins is a user-programmable I/O. The PGCK1-PGCK4 pins drive the four Primary Global Buffers. Any input pad symbol connected directly to the input of a BUFGP symbol is automatically placed on one of these pins.
21, 48, 73, 99	SGCK1 - SGCK4 (Spartan)	Weak Pull-up	I or I/O	Four Secondary Global inputs each drive a dedicated internal global net with short delay and minimal skew. These internal global nets can also be driven from internal logic. If not used to drive a global net, any of these pins is a user-programmable I/O pin. The SGCK1-SGCK4 pins provide the shortest path to the four Secondary Global Buffers. Any input pad symbol connected directly to the input of a BUFGS symbol is automatically placed on one of these pins.
	GCK1 - GCK8 (Spartan-XL)	Weak Pull-up	I or I/O	Eight Global inputs each drive a dedicated internal global net with short delay and minimal skew. These internal global nets can also be driven from internal logic. If not used to drive a global net, any of these pins is a user-programmable I/O pin. The GCK1-GCK8 pins provide the shortest path to the eight Global Low-Skew Buffers. Any input pad symbol connected directly to the input of a BUFGLS symbol is automatically placed on one of these pins.
80	CS1 (Spartan-XL)		I/O	During Express configuration, CS1 is used as a serial-enable signal for daisy-chaining.
	D0-D7 (Spartan-XL)		I/O	During Express configuration, these eight input pins receive configuration data. After configuration, they are user-programmable I/O pins.
72	DIN		I/O	During Slave Serial or Master Serial configuration, DIN is the serial configuration data input receiving data on the rising edge of CCLK. After configuration, DIN is a user-programmable I/O pin.
73	DOUT	O	I/O	During Slave Serial or Master Serial configuration, DOUT is the serial configuration data output that can drive the DIN of daisy-chained slave FPGAs. DOUT data changes on the falling edge of CCLK, one-and-a-half CCLK periods after it was received at the DIN input. In Spartan-XL Express mode, DOUT is the status output that can drive the CS1 of daisy-chained FPGAs, to enable and disable downstream devices. After configuration, DOUT is a user-programmable I/O pin.
Unrestricted User-Programmable I/O Pins				
	I/O	Weak Pull-up	I/O	These pins can be configured to be input and/or output after configuration is completed. Before configuration is completed, these pins have an internal high-value pull-up resistor network that defines the logic level as High.

Q728,Q768: MBM29LV002/004TC-910PTN (Flash memory)

BLOCK DIAGRAM

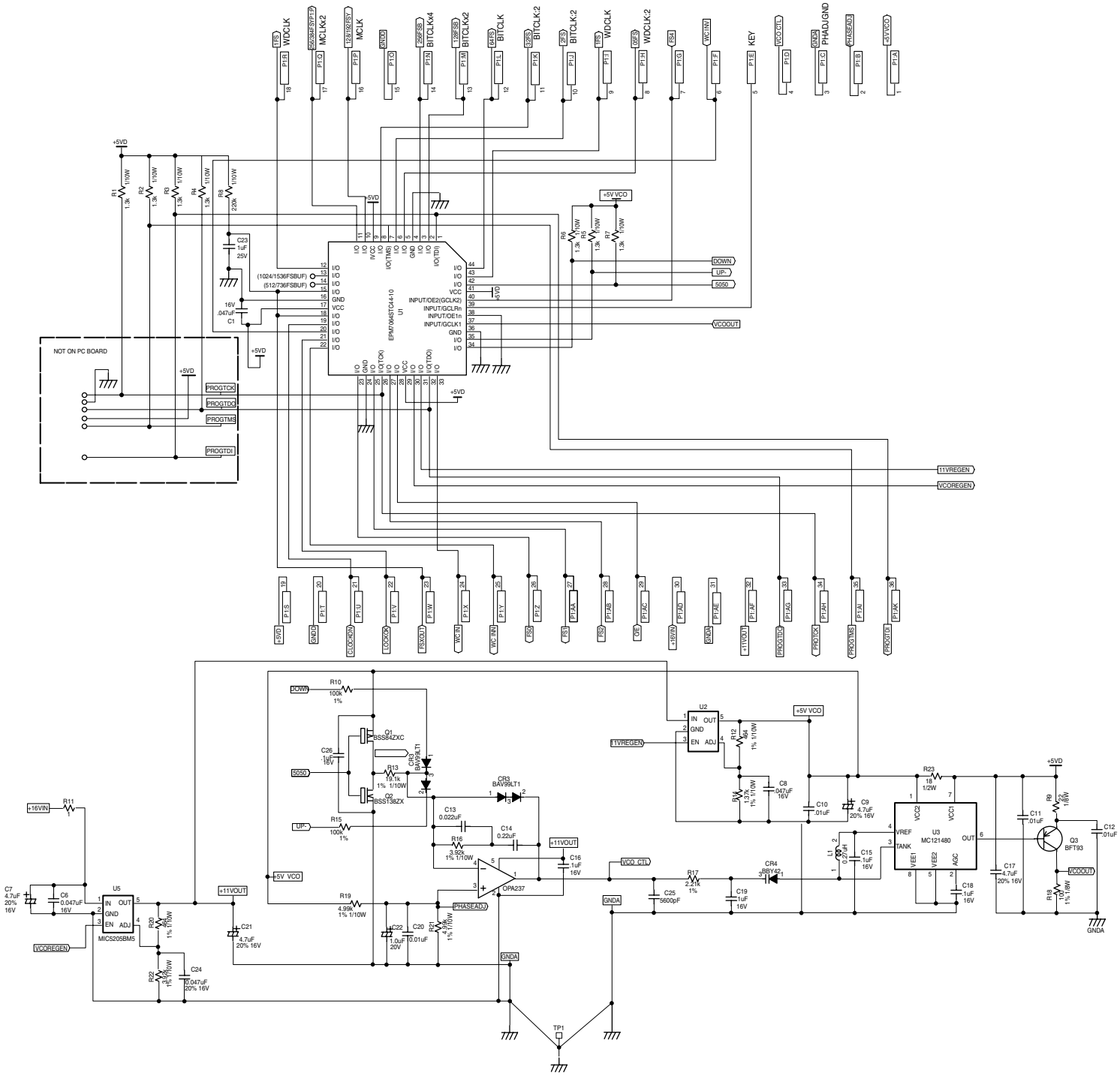


DESCRIPTION



Pin	Function
A_0 to A_{17}	Address Inputs
DQ_0 to DQ_7	Data Inputs/Outputs
$\overline{CE}$	Chip Enable
$\overline{OE}$	Output Enable
$\overline{WE}$	Write Enable
RY/$\overline{BY}$	Ready/Busy Output
$\overline{RESET}$	Hardware Reset Pin/Temporary Sector Unprotection
N.C.	No Internal Connection
V_{SS}	Device Ground
V_{CC}	Device Power Supply

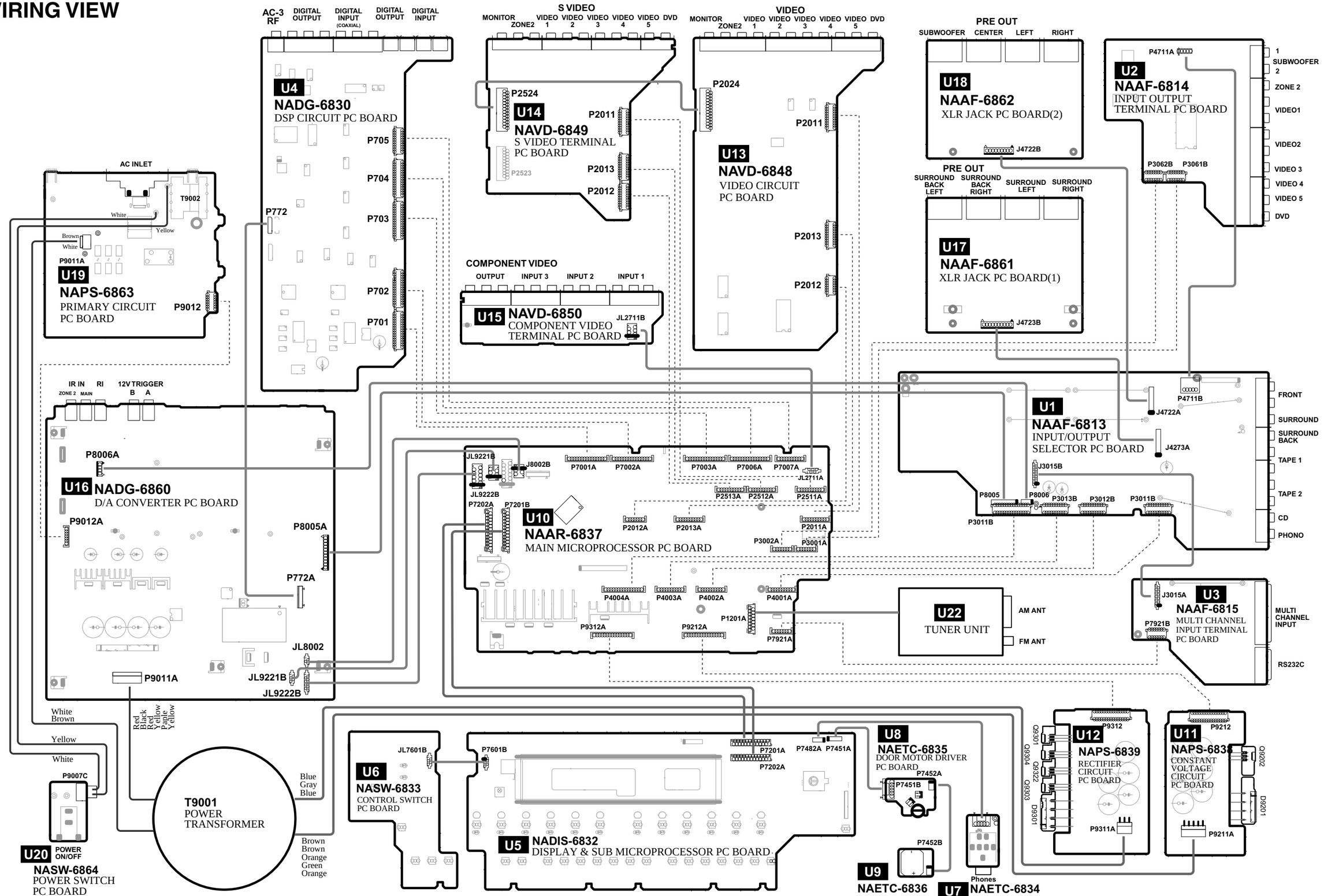
Q8701 : CC1536E (MASTER CLOCK MODULE)



All resistors are thick film or metal film.
All capacitor dilelectrics are X7R.
All capacitor values are in microfarads, 50V, 10%.
All resistor values are in ohms, 1/8W, 5%.

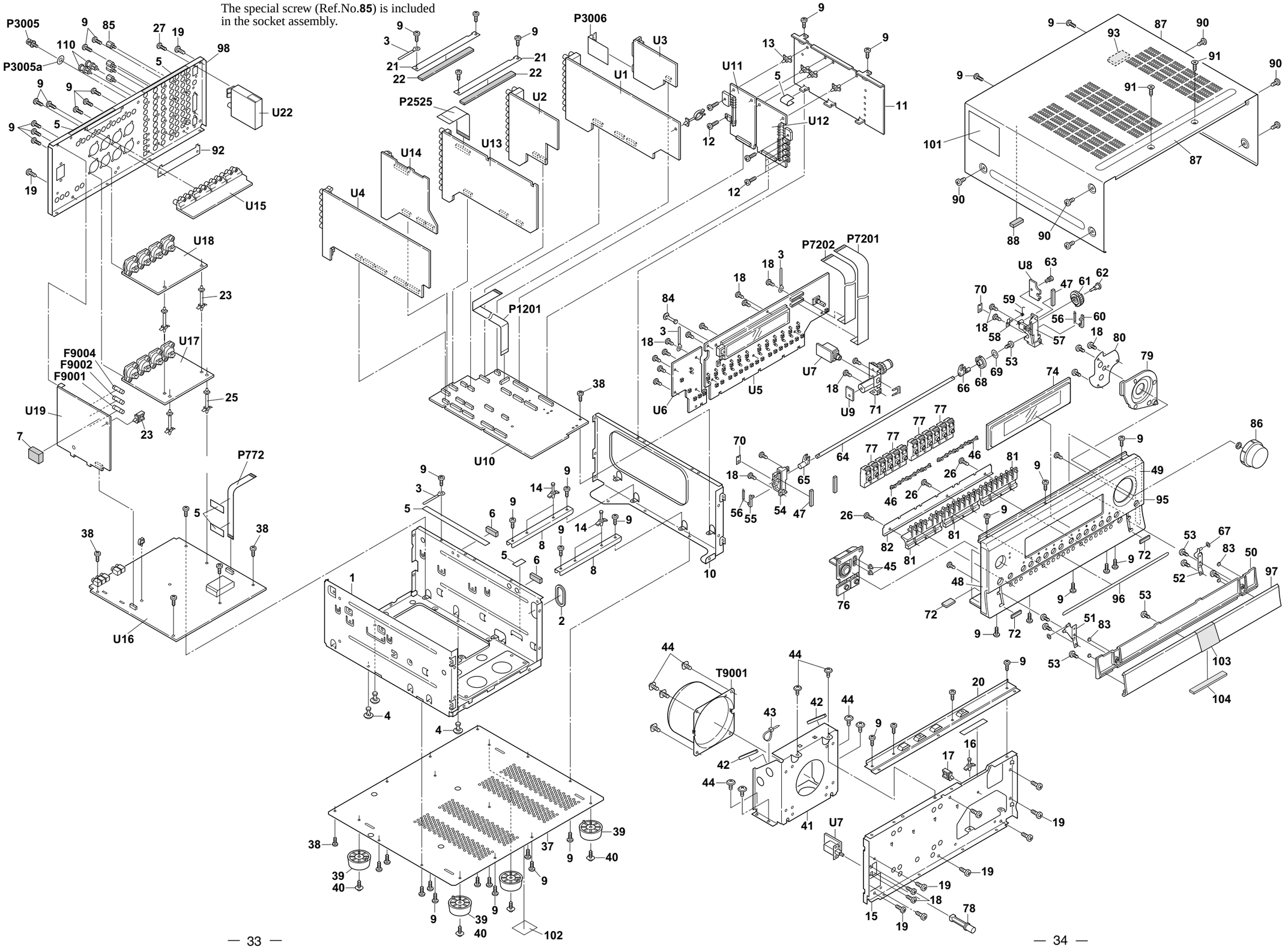
NOTE: Unless otherwise specified.

WIRING VIEW


AC-3 RF
DIGITAL OUTPUT
DIGITAL INPUT (COAXIAL)
DIGITAL OUTPUT
DIGITAL INPUT
U4
NADG-6830
DSP CIRCUIT PC BOARD
P705
P704
P703
P702
P701
P772
S VIDEO
MONITOR
ZONE2
VIDEO 1
VIDEO 2
VIDEO 3
VIDEO 4
VIDEO 5
DVD
P2524
U14
NAVD-6849
S VIDEO TERMINAL PC BOARD
P2523
P2011
P2013
P2012
VIDEO
P2024
U13
NAVD-6848
VIDEO CIRCUIT PC BOARD
P2011
P2013
P2012
COMPONENT VIDEO
OUTPUT
INPUT 3
INPUT 2
INPUT 1
U15
NAVD-6850
COMPONENT VIDEO TERMINAL PC BOARD
JL2711B
PRE OUT
SUBWOOFER
CENTER
LEFT
RIGHT
U18
NAAF-6862
XLR JACK PC BOARD(2)
J4722B
P4711A
U2
NAAF-6814
INPUT OUTPUT TERMINAL PC BOARD
P3062B
P3061B
1 SUBWOOFER 2
ZONE 2
VIDEO1
VIDEO2
VIDEO 3
VIDEO 4
VIDEO 5
DVD
PRE OUT
SURROUND BACK LEFT
SURROUND BACK RIGHT
SURROUND LEFT
SURROUND RIGHT
U17
NAAF-6861
XLR JACK PC BOARD(1)
J4723B
AC INLET
T9002
White
Yellow
Brown
White
P9011A
U19
NAPS-6863
PRIMARY CIRCUIT PC BOARD
P9012
IR IN
ZONE 2
MAIN
RI
12V TRIGGER
B
A
P8006A
U16
NADG-6860
D/A CONVERTER PC BOARD
P9012A
P8005A
P772A
JL8002
P9011A
JL9221B
JL9222B
U1
NAAF-6813
INPUT/OUTPUT SELECTOR PC BOARD
P4711B
J4722A
J4273A
J3015B
P8005
P8006
P3013B
P3012B
P3011B
FRONT
SURROUND
SURROUND BACK
TAPE 1
TAPE 2
CD
PHONO
JL9221B
J8002B
JL9222B
P7202A
P7201B
U10
NAAR-6837
MAIN MICROPROCESSOR PC BOARD
P7001A
P7002A
P7003A
P7006A
P7007A
JL2711A
P2513A
P2512A
P2511A
P2012A
P2013A
P2011A
P3002A
P3001A
P4004A
P4003A
P4002A
P4001A
P9312A
P9212A
P1201A
P7921A
U22
TUNER UNIT
AM ANT
FM ANT
U3
NAAF-6815
MULTI CHANNEL INPUT TERMINAL PC BOARD
J3015A
P7921B
MULTI CHANNEL INPUT
RS232C
White
Brown
Yellow
White
P9007C
U20
POWER ON/OFF
NASW-6864
POWER SWITCH PC BOARD
T9001
POWER TRANSFORMER
Red
Black
Red
Yellow
Paple
Yellow
Blue
Gray
Blue
Brown
Brown
Orange
Green
Orange
JL7601B
U6
NASW-6833
CONTROL SWITCH PC BOARD
P7601B
P7201A
P7202A
P7482A
P7451A
U5
NADIS-6832
DISPLAY & SUB MICROPROCESSOR PC BOARD
U8
NAETC-6835
DOOR MOTOR DRIVER PC BOARD
P7452A
P7451B
P7452B
U9
NAETC-6836
DOOR MOTOR PC BOARD
Phones
U7
NAETC-6834
HEADPHONE JACK PC BOARD
P9312
U12
NAPS-6839
RECTIFIER CIRCUIT PC BOARD
Q9301
Q9304
Q9302
Q9303
D9301
P9311A
P9212
U11
NAPS-6838
CONSTANT VOLTAGE CIRCUIT PC BOARD
Q9202
D9201
P9211A

CHASSIS EXPLODED VIEW

The special screw (Ref.No.**85**) is included in the socket assembly.



CHASSIS EXPLODED VIEW PARTS LIST

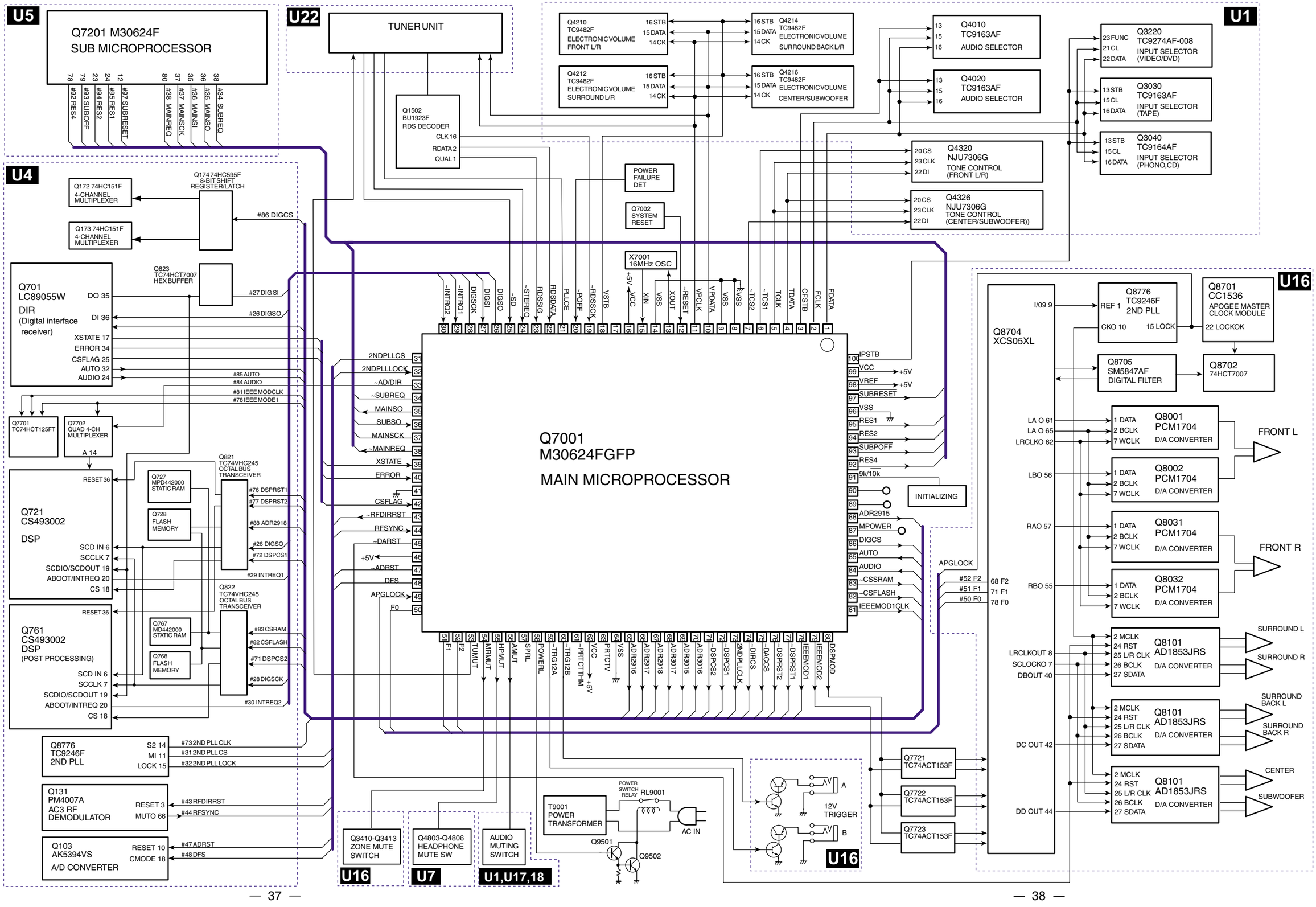
NOTE:
<UDD> 120V model only
<UDT> Asian model only for 120V
<UPT> Asian model only for 230V
<UPP> European model only
<UGT> 220V model only
<UJJ> Japanese model only

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

REF. NO.	PART NO.	DESCRIPTION
1	27100319-2	Chassis
2	28170070	Bushing
3	27255004	CS-1, Clip
4	27190813	KGPS-10RF, Holder
5	29110083	Adhesive tape 16u
6	28141421	t8*10*30, Cushion
7	28141423	t16*20*30, Cushion
8	27130778	Bracket P
9	838430088	3TTB+8B(BC), Self tapping screw
10	27115259-1	Side bracket
11	27160462-1	Heat sink S
12	838430107	3TTB+10S(BC), Self tapping screw
13	27190009	KGLS-4S, Holder
14	27190902	KGPS-16S, Holder
15	27130779E	Bracket Shield
16	27190938	KGPS-8S, Holder
17	27300833	WS-2NS, Clamp
18	82143006	3P+6FN(BC), Pan head screw
19	838440089	4TTB+8C(BC), Self tapping screw
20	27130832-1A	Bracket F
21	27130837-1	Bracket U
22	28141095	Cushion
23	27190369	Holder
25	27190470	KGLS-18S, Holder
26	82143010	3P+10FN(BC), Pan head screw
27	838430068	3TTB+6B(BC), Self tapping screw
37	27170309	Bottom board
38	838130088	TTB+8B(BC), Self tapping screw
39	27175317	Leg
40	831430088	3TTW+8B(BC), Self tapping screw
41	27130780-1	Bracket PT
42	28170071	Bushing
43	260208	Wire tie
44	830440089	4TTC+8C(BC), Self tapping screw
46	28198903	Facet
47	28141432	t1.5*12*4, Cushion
48	28125375	End cap, SL
49	28125376	End cap, SR
50	28148435	Door base
51	28183002A	Stay L
52	28183003A	Stay R
53	834426068	2.6TTS+6B(BC), Self tapping screw
54	27191094A	Holder L
55	28335065A	Lever L
56	27180577	Spring
57	27191095A	Holder R
58	27141758A	Retainer SP
59	27180579	Spring, door
60	28335066A	Lever R
61	27301943	Gear A
62	27260364	Shaft A
63	880011	NRP-355, Plastic rivet
64	27260363	Shaft
65	27260365A	Shaft L
66	27260366A	Shaft R
67	27270218	Spacer
68	27301942	Gear
69	27141759	Retainer W
70	27141752	Retainer S
71	24804045B	Motor
72	28141426	t1.5*25*5, Cushion
73	28141430	Cushion
74	28191883A	Clear plate
76	28325748	Knob AS(ST)
77	28325746	Knob AS(SEL)
78	28325751	Knob AS(POWER)
79	27268016A	Guide (VOL AS)
80	27130838	Bracket, volume
81	28325723A	Knob, door
82	27141755	Bracket, knob
83	28140860	Cushion
84	27190926	KGPS-18RF, Holder
86	28325754	Knob (VOL)AS
87	28184776A	Top cover
88	28141422	t12x15x30, Cushion
90	838240089	4TTB+8C(NI), Self tapping screw
91	801599	Special screw (HFC)
92	28184772	Cover
93	28141441	Cushion
95	27212194	Front panel <UDD,UDT,UPT,UGT,UJJ>
	27212195	Front panel <UPP>
96	27262646	Plate L <UDD,UDT,UPT,UGT,UJJ>
	27262647	Plate L <UPP>
97	28148439	Door
98	27122714C	Rear panel <UDD,UDT>
	27122715A	Rear panel <UPP,UPT>
	27122726A	Rear panel <UGT>
	27122716A	Rear panel <UJJ>
101	29362591	Label
102	29360778	⚠ Label flash <UDD>
103	29362686	Label, door
104	29095880	0.515*900*900 Sheet,
110	25055959	NPLG-1P912 Shorted plug
F9001	252163	⚠ 4A-UL/T-237, Fuse <UDD, UDT>
F9002	252074	⚠ 2A-SE-EAK, Fuse <UPP,UPT, UGT>
F9004	252164	⚠ 5A-UL/T-237, Fuse <UJJ>
P1201	2047152512	NCFC7-152512, Flexible flat cable
P2525	2047261022	NCFC7-261022, Flexible flat cable
P3005	25060151	Ground terminal
P3005a	87643010	W3*10F(BC), Flat washer
P3006	27262657	Shield plate
P7201	2047242512	NCFC7-242512, Flexible flat cable
P7202	2047242512	NCFC7-242512, Flexible flat cable
P772	2044110142	NCFC4-110142, Flexible flat cable
P9001	253301HIT	⚠ AS-UC-2, Power supply cord <UDD,UDT>
	253302HIT	⚠ AS-CEE-3, Power supply cord <UPP,UGT,UPT>
	253303HIT	⚠ AS-JA Power supply vord <UJJ>
T9001	2301456A	⚠ NPT-1392D, Power transformer <UDD,UDT>
	2301457A	⚠ NPT-1392P, Power transformer <UPP,UPT>
	2301458A	⚠ NPT-1392G, Power transformer <UGT>
	2301455A	⚠ NPT-1392J, Power transformer <UJJ>

REF. NO.	PART NO.	DESCRIPTION
U1	1A871513-1F	NAAF-6813-1F, Input /output selector PC board ass'y board ass'y <UDD,UDT,UJJ>
	1A871513-1G	NAAF-6813-1G, Input /output selector PC board ass'y board ass'y <UPP,UPT,UGT>
U2	1A871514-1F	NAAF-6814-1F, Input /output terminal PC board ass'y board ass'y <UDD,UDT,UJJ>
	1A871514-1G	NAAF-6814-1G, Input /output terminal PC board ass'y board ass'y <UPP,UPT,UGT>
U3	1A871515-1F	NAAF-6815-1F, Multi channel input terminal PC board ass'y <UDD,UDT,UJJ>
	1A871515-1G	NAAF-6815-1G, Multi channel input terminal PC board ass'y <UPP,UPT,UGT>
U4	1A871530-2	NADG-6830-2, DSP circuit PC board ass'y
U5	1A871532-1F	NADIS-6832-1F, Display & Sub-microprocessor PC board ass'y <UDD>
	1A871532-1G	NADIS-6832-1G, Display & Sub-microprocessor PC board ass'y <UPP>
	1A871532-1H	NADIS-6832-1H, Display & Sub-microprocessor PC board ass'y <UPT,UDT,UGT>
	1A871532-1I	NADIS-6832-1I, Display & Sub-microprocessor PC board ass'y <UJJ>
U6	1A871533-1F	NASW-6833-1F, Operation switch PC board ass'y <UDD>
	1A871533-1G	NASW-6833-1G, Operation switch PC board ass'y <UPP>
	1A871533-1H	NASW-6833-1H, Operation switch PC board ass'y <UPT,UDT,UGT>
	1A871533-1I	NASW-6833-1I, Operation switch PC board ass'y <UJJ>
U7	1A871534-1F	NAETC-6834-1F, Headphone jack PC board ass'y <UDD>
	1A871534-1G	NAETC-6834-1G, Headphone jack PC board ass'y <UPP>
	1A871534-1H	NAETC-6834-1H, Headphone jack PC board ass'y <UPT,UDT,UGT>
	1A871534-1I	NAETC-6834-1I, Headphone jack PC board ass'y <UJJ>
U8	1A871535-1F	NAETC-6835-1F, Door motor drive PC board ass'y <UDD>
	1A871535-1G	NAETC-6835-1G, Door motor drive PC board ass'y <UPP>
	1A871535-1H	NAETC-6835-1H, Door motor drive PC board ass'y <UPT,UDT,UGT>
	1A871535-1I	NAETC-6835-1I, Door motor drive PC board ass'y <UJJ>
U9	1A871536-1F	NAETC-6836-1F, Door motor PC board ass'y <UDD>
	1A871536-1G	NAETC-6836-1G, Door motor PC board ass'y <UPP>
	1A871536-1H	NAETC-6836-1H, Door motor PC board ass'y <UPT,UDT,UGT>
	1A871536-1I	NAETC-6836-1I, Door motor PC board ass'y <UJJ>
U10	1A871537-1F	NAAR-6837-1F, Main microprocessor PC board ass'y <UDD>
	1A871537-1G	NAAR-6837-1G, Main microprocessor PC board ass'y <UPP>
	1A871537-1H	NAAR-6837-1H, Main microprocessor PC board ass'y <UPT,UDT,UGT,UJJ>
U11	1A871538-1F	NAPS-6838-1F, Rectifier circuit PC board ass'y <UDD>
	1A871538-1G	NAPS-6838-1G, Rectifier circuit PC board ass'y <UPP>
	1A871538-1H	NAPS-6838-1H, Rectifier circuit PC board ass'y <UPT,UDT,UGT,UJJ>
U12	1A871539-1F	NAPS-6839-1F, Constant voltage circuit PC board ass'y <UDD>
	1A871539-1G	NAPS-6839-1G, Constant voltage circuit PC board ass'y <UPP>
	1A871539-1H	NAPS-6839-1H, Constant voltage circuit PC board ass'y <UPT,UDT,UGT,UJJ>
U13	1A871548-1F	NAVD-6848-1F, Video circuit PC board ass'y <UDD,UJJ>
	1A871548-1G	NAVD-6848-1G, Video circuit PC board ass'y <UDT,UPP,UPT,UGT>
U14	1A871549-1F	NAVD-6849-1F, S Video terminal PC board ass'y <UDD,UJJ>
	1A871549-1G	NAVD-6849-1G, S Video terminal PC board ass'y <UDT,UPP,UPT,UGT>
U15	1A871550-1F	NAVD-6850-1F, Component video terminal PC board ass'y <UDD,UJJ>
	1A871550-1G	NAVD-6850-1G, Component video terminal PC board ass'y <UDT,UPP,UPT,UGT>
U16	1A871560-2	NADG-6860-2, D/A Converter circuit PC board ass'y
U17	1A871561-2F	NAAF-6861-2F, XLR jack PC board ass'y (1) <UDD,UDT>
	1A871561-2G	NAAF-6861-2G, XLR jack PC board ass'y (1) <UPP,UPT>
	1A871561-2H	NAAF-6861-2H, XLR jack PC board ass'y (1) <UGT>
	1A871561-2I	NAAF-6861-2I, XLR jack PC board ass'y (1) <UJJ>
U18	1A871562-2F	NAAF-6862-2F, XLR jack PC board ass'y (2) <UDD,UDT>
	1A871562-2G	NAAF-6862-2G, XLR jack PC board ass'y (2) <UPP,UPT>
	1A871562-2H	NAAF-6862-2H, XLR jack PC board ass'y (2) <UGT>
	1A871562-2I	NAAF-6862-2I, XLR jack PC board ass'y (2) <UJJ>
U19	1A871563-2F	NAPS-6863-2F, Primary circuit PC board ass'y <UDD,UDT>
	1A871563-2G	NAPS-6863-2G, Primary circuit PC board ass'y <UPP,UPT>
	1A871563-2H	NAPS-6863-2H, Primary circuit PC board ass'y <UGT>
	1A871563-2I	NAPS-6863-2I, Primary circuit PC board ass'y <UJJ>
U20	1A871564-2F	NASW-6864-2F, Power switch PC board ass'y <UDD,UDT>
	1A871564-2G	NASW-6864-2G, Power switch PC board ass'y <UPP,UPT>
	1A871564-2H	NASW-6864-2H, Power switch PC board ass'y <UGT>
	1A871564-2I	NASW-6864-2I, Power switch PC board ass'y <UJJ>
U22	240134	TFCE1U114A, Tuner unit <UDD>
	240135	TFCE1E512A, Tuner unit <UPP, UDT, UPT,UGT>
	240133	TFCE1J114A,Tuner unit <UJJ>

MAIN MICROPROCESSOR CONNECTION DIAGRAM



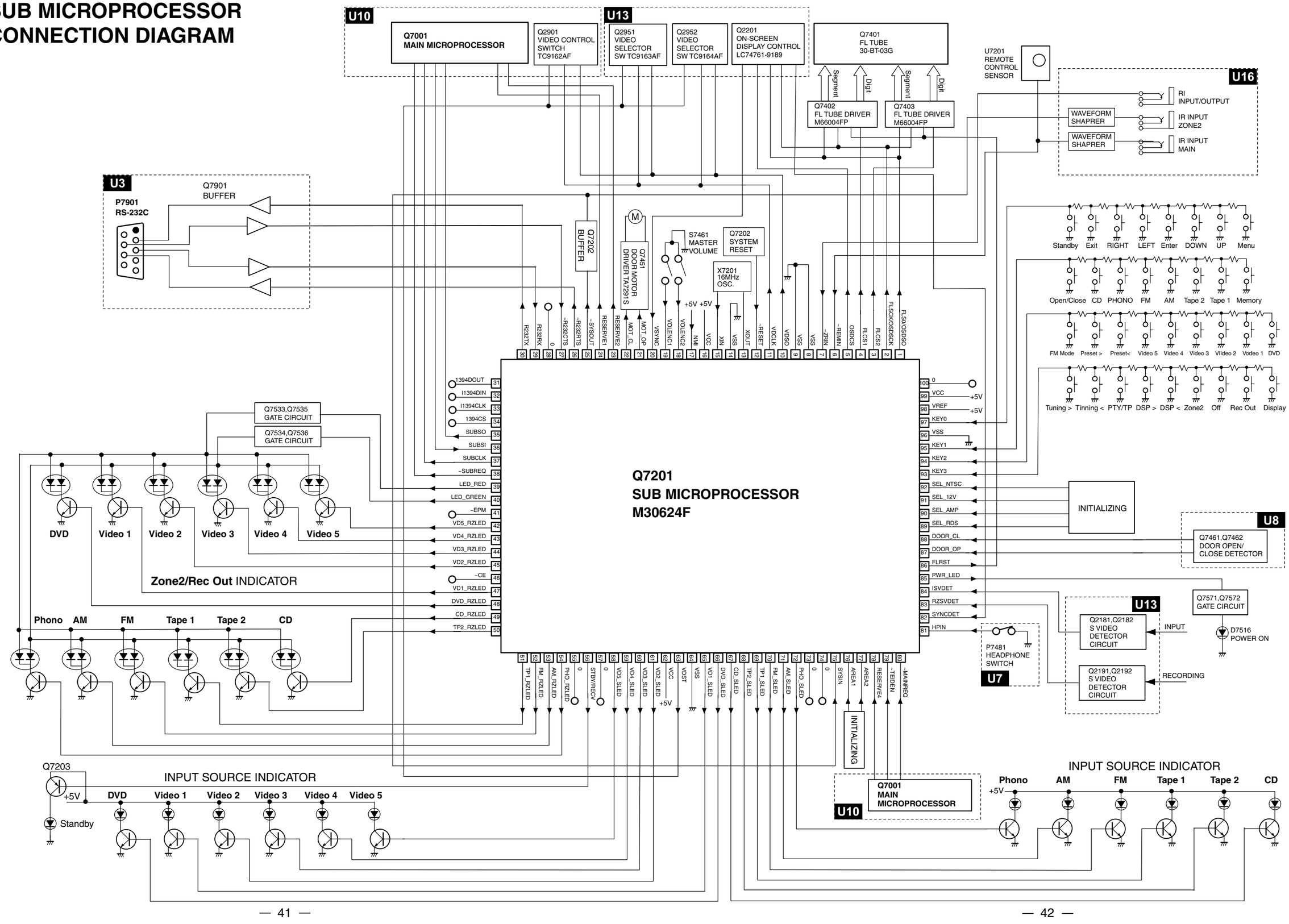
MAIN MICROPROCESSOR TERMINAL DESCRIPTION

Q7001 : M30624FGFP

No.	Function	I/O	Act.	Description
1	FDATA	O	H	Serial data output terminal of function switch for input and configuration.
2	FCLK	O	CLK	Serial clock output terminal of function switch for input and configuration.
3	CFSTB	O	H	Serial clock output terminal of function switch for configuration.
4	TDATA	O	H	Serial data output terminal of tone control IC.
5	TCLK	O	CLK	Serial clock output terminal of tone control IC.
6	~TCS1	O	L	Chip select output terminal of tone control IC for front channel.
7	~TCS2	O	L	Serial data output terminal of tone control IC for center and sub woofer.
8	VSS	I		Input terminal to switch the bus width of external data. Connect to the ground.
9	VSS	I		Input terminal to switch processor mode. Connect to the ground.
10	VPDATA	O	H	Serial data output terminal of electrical volume and PLL ICs.
11	VPCLK	O	CLK	Serial clock output terminal of electrical volume and PLL ICs.
12	~RESET	I		System reset input terminal.
13	XOUT	O		Oscillator circuit output terminal of main clock.
14	VSS	I		Power supply terminal. Connect to the ground.
15	XIN	I		Oscillator circuit input terminal of main clock.
16	VCC	I		Power supply terminal. Connect to +5V.
18	VSTB	O	H	Strobe output terminal of electrical volume.
19	~RDSSCK	I	CLK	Clock input terminal from RDS modulator IC.
20	~POFF	I	L	Input terminal for power failure detection.
21	PLLCE	O	H	Strobe output terminal of PLL IC.
22	RDSDATA	I	H	DATA input terminal from RDS modulator IC.
23	RDSSIG	I	H	Signal strength detection terminal of tuner.
24	~STEREO	I	L	FM stereo broadcast detection terminal.
25	~SD	I	L	Signal strength detection terminal of tuner.
26	DIGSO	O	H	Serial data output terminal to DSP ICs.
27	DIGSI	I	H	Serial data input terminal from DSP and DIR ICs.
28	DIGSCK	O	CLK	Serial clock output terminal to DSP ICs.
29	~INTRQ1	I	L	INTRQ input terminal from DSP2.
30	~INTRQ2	I	L	INTRQ input terminal from DSP1.
31	2NDPLLCS	O	H	Serial chip select output terminal of second PLL IC.
32	2NDPLLLOCK	I	H	Lock detection input terminal from second PLL IC
33	~AD/DIR	O	H	ADC/DIR select output terminal
34	~SUBREQ	I	L	Request input terminal from sub microprocessor
35	MAINSO	O	H	Serial data output terminal of sub microprocessor
36	MAINSI	I	H	Serial data input terminal from sub microprocessor
37	MAINSCK	O	CLK	Serial clock output terminal of sub microprocessor
38	~MAINREQ	O	L	Request output terminal from sub microprocessor
39	XSTATE	I	H	Source clock change monitor input terminal (DIR)
40	ERROR	I	H	Flag input terminal for PLL lock error or data error.
41				Port of flash memory rewriting (DIR)
42	CSFLAG	I	H	Update flag input terminal of head 40 bits of channel status
43	~RFDIRRST	O	L	DIR/AC-3 RF RESET output terminal (common)
44	RFSYNC	I	H	Synchronizing input terminal for AC-3 RF
45	~DARST	O	L	Reset signal output terminal for DAC
46				Port of flash memory rewriting (DIR)
47	~ADRST	O	L	Reset signal output terminal for ADC
48	DFS	O	H	Sampling frequency control output terminal for ADC/DAC
49	APGLOCK	I	H	Lock ok signal detection terminal of apgee master clock unit.
50	F0	O	H	Sampling frequency control output terminal for Gate array (Q8704)

No.	Function	I/O	Act.	Description
51	F1	O	H	Sampling frequency control output terminal for Gate array (Q8704)
52	F2	O	H	Sampling frequency control output terminal for Gate array (Q8704)
53	TUMUT	O	H	Muting control output terminal for tuner section.
54	MRMUT	O	H	Muting control output terminal for zone 2.
55	HPMUT	O	H	Muting control output terminal for headphone.
56	AMUT	O	H	Muting control output terminal for analog section.
57	SPRL	O	H	Speaker relay control output terminal.
58	POWERL	O	H	Power relay control output terminal.
59	~TRG12A	O	L	12V trigger output terminal.
60	~TRG12B	O	L	12v trigger output terminal.
61	~PRTCTTHM	I	L	Thermal protection detection input terminal
62	VCC	I		Power supply terminal. +5V.
63	PRTCTV	I	H	Current/Voltage detection input terminal of protection circuit
64	VSS	I		Power supply terminal. Connect to the ground.
65	ADR2916	O	H	Control output terminal for address 16 of flash memory IC Q728
66	ADR2917	O	H	Control output terminal for address 17 of flash memory IC Q728
67	ADR2918	O	H	Control output terminal for address 18 of flash memory IC Q728
68	ADR3017	O	H	Control output terminal for address 17 of flash memory IC Q768
69	ADR3015	O	H	Control output terminal for address 15 of flash memory IC Q768
70	ADR3016	O	H	Control output terminal for address 16 of flash memory IC Q768
71	~DSPCS2	O	L	Chip select output terminal to DSP IC 2
72	~DSPCS1	O	L	Chip select output terminal to DSP IC 1
73	2NDPLLCLK	O	CLK	Serial clock output terminal to second PLL IC
74	~DIRCS	O	L	Chip select output terminal to DIR IC
75	~DACCS	O	L	Chip select output terminal to DAC
76	~DSPRST2	O	L	Reset output terminal to DSP IC 2
77	~DSPRST1	O	L	Reset output terminal to DSP IC 1
78	IEEEMOD1	O	H	IEEE mode select output terminal. High level when clock of two lines and data of a line.
79	IEEEMOD2	O	H	IEEE mode select output terminal. High level when clock of two lines and data of four lines.
80	DSPMOD	O	H	High level when DSP 1.
81	IEEEMOD1CLK	O	H	Select output terminal of clock master or slave.
82	~CSFLASH	O	L	Chip select output terminal of flash memory ICs.
83	~CSSRAM	O	L	Chip select output terminal of SRAM ICs
84	~AUDIO	I	L	Audio detect input terminal of DIR IC
85	AUTO	I	H	Auto detect input terminal of DIR IC
86	DIGCS	O	H	Chip select output terminal of digital input switch
87	MPOWER	O	L	Initializing of power amplifier.
88	ADR2915	O	H	Address 15 control output terminal of flash memory
91	9k/~10k	I	H	Initializing input terminal for band step of AM
92	MSPORT4	O	H	Not used.
93	~SUBPOFF	O	L	Signal control output terminal for power off of sub microprocessor
94	MSPORT2	O	H	Not used.
95	MSPORT1	O	H	Not used.
96	VSS	I		Power supply terminal for AD converter
97	~SUBRESET	O	L	Reset control terminal for sub microprocessor
98	VREF	I		Reference voltage input terminal for A/D converter
99	VCC	I		Power supply terminal for A/D converter. Connect to 5V.
100	IPSTB	O	H	Strobe output terminal for function switch

SUB MICROPROCESSOR CONNECTION DIAGRAM



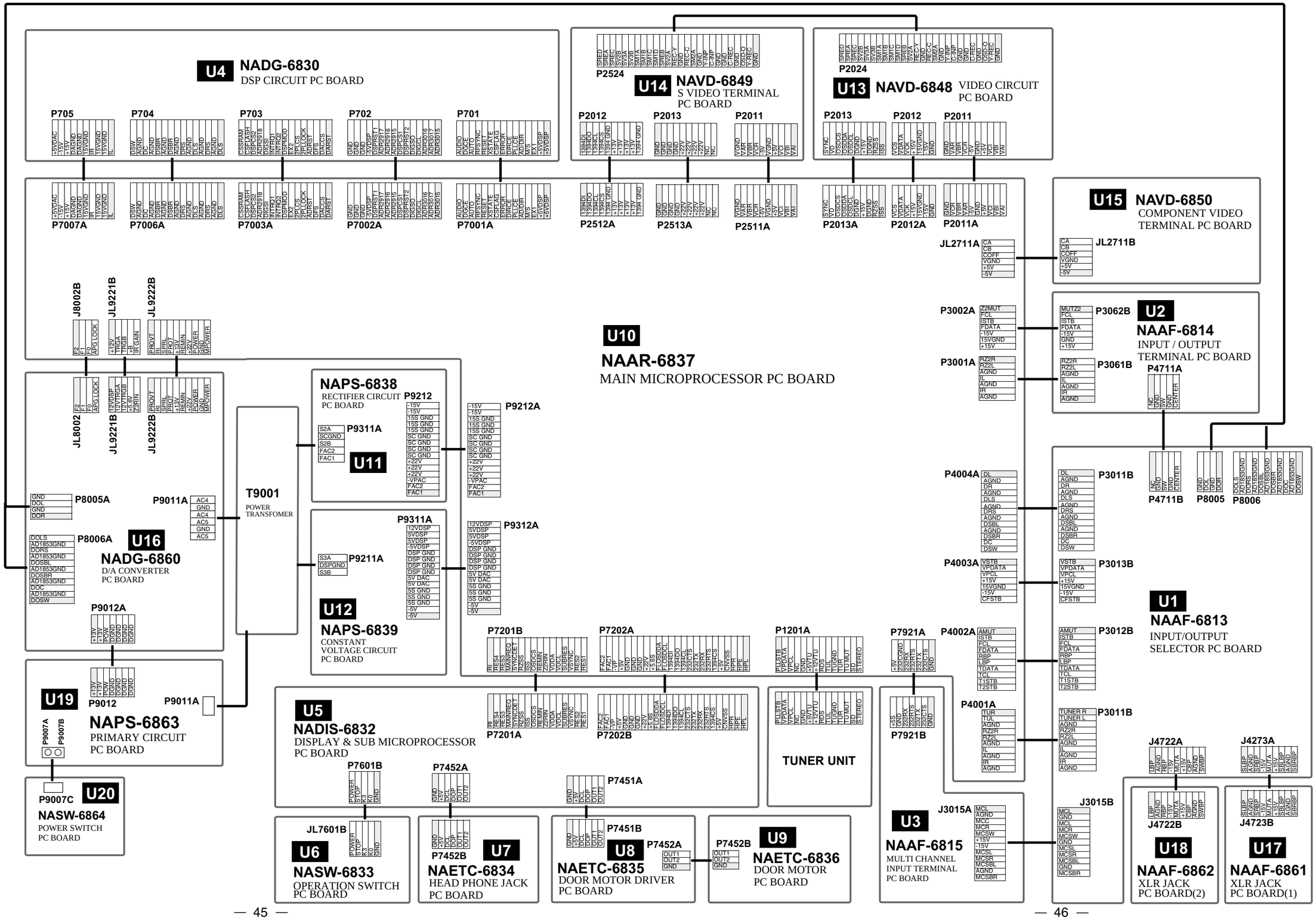
SUB MICROPROCESSOR TERMINAL DESCRIPTION

Q7201 : M30624FGFP

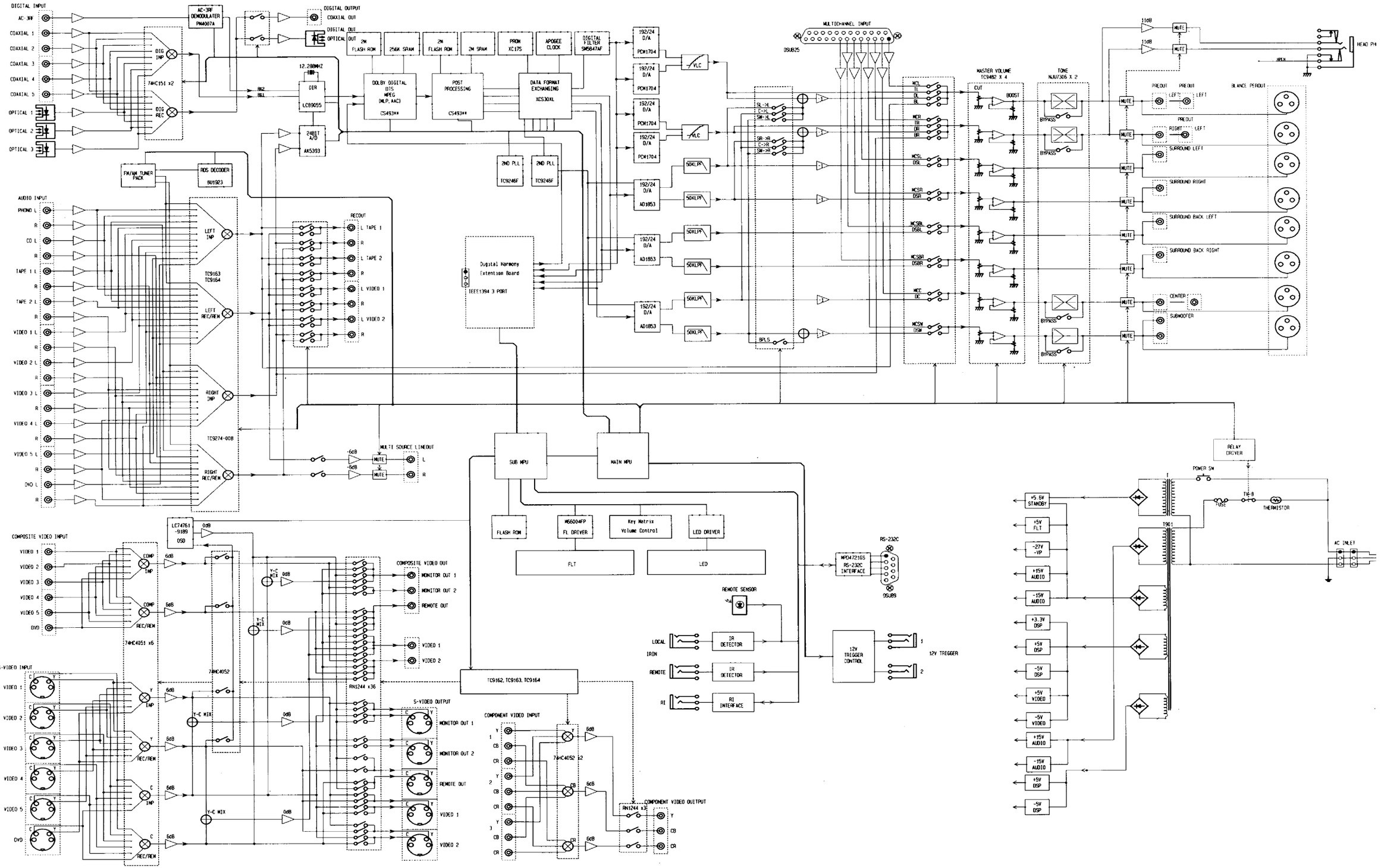
No.	Function	I/O	Act.	Description
1	FLS0/OSDSO	O	H	Serial data output terminal for FL tube driver and on-screen ICs.
2	FLSCK/OSDSCK	O	CLK	Serial clock output terminal for FL tube driver and on-screen ICs.
3	FLCS2	O	H	Chip selection output for FL tube driver IC 2.
4	FLCS1	O	H	Chip selection output for FL tube driver IC 1.
5	OSDCS	O	H	Chip selection output for on-screen IC.
6	~REMIN	I	L	Signal input terminal from remote control
7	~ZRIN	I	L	Signal input terminal from remote control for zone 2
8	VSS			Switch input terminal for external data bus. Connect to ground terminal.
9	VSS			Switch input terminal for processor mode. Connect to ground terminal.
10	VDSO	O	H	Serial data output terminal for video function switch IC.
11	VDCLK	O	CLK	Serial clock output terminal for video function switch IC.
12	~RESET			Reset input terminal of microprocessor
13	XOUT			Oscillator output terminal of main clock.
14	VSS			Power supply terminal. Connect to ground terminal.
15	XIN			Oscillator input terminal of main clock.
16	VCC			Power supply terminal. Connect to +5V.
17	NMI	I	H	Connect to 5V.
18	VOLENC2	I	H	Input B terminal from rotary encoder for main volume.
19	VOLENC1	I	H	Input A terminal from rotary encoder for main volume.
20	VSYNC	I	H	Video vertical synchronizing signal input terminal to judge synchronizing
21	MOT_OP	O	H	Control output terminal to open the door.
22	MOT_CL	O	H	Control output terminal to close the door.
23	RESERVE2	O	H	Transfer request output terminal for main microprocessor.
24	RESERVE1	O	H	Transfer request output terminal for main microprocessor.
25	~SYSOUT	O	L	RI code output terminal
26	~R232RTS	O	L	Transfer request output terminal for RS232C.
27	~R232CTS	I	L	Transfer data output terminal for RS232C.
28		O	0	Not used.
29	R232RX	I	H	Receiving input terminal for RS232C
30	R232TX	O	H	Transfer output terminal for RS232C.
31	I1394DOUT	O	H	Serial data output terminal for main microprocessor.
32	I1394DIN	I	H	Serial data input terminal for main microprocessor.
33	I1394CLK	O	CLK	Serial clock output terminal for main microprocessor.
34		O	0	Not used.
35	SUBSO	O	L	Serial data output terminal to main microprocessor.
36	SUBSI	I	L	Serial data input terminal from main microprocessor.
37	SUBCLK	O	CLK	Serial clock input terminal from main microprocessor
38	~SUBREQ	O	L	Request signal output terminal to main microprocessor.
39	LED_RED	O	H	Output terminal to light up the red LED.
40	LED_GREEN	O	H	Output terminal to light up green LED.
41	~EPM	O	L	EPM input terminal to write program.
42	VD5_RZLED	O	H	Control output terminal for Video 5 recording or Zone 2 LED.
43	VD4_RZLED	O	H	Control output terminal for Video 4 recording or Zone 2 LED.
44	VD3_RZLED	O	H	Control output terminal for Video 3 recording or Zone 2 LED.
45	VD2_RZLED	O	H	Control output terminal for Video 2 recording or Zone 2 LED.
46	~CE	O	L	Chip enable input terminal to write program.
47	VD1_RZLED	O	H	Control output terminal for Video 1 recording or Zone 2 LED.
48	DVD_RZLED	O	H	Control output terminal for DVD recording or Zone 2 LED.
49	CD_RZLED	O	H	Control output terminal for CD recording or Zone 2 LED.
50	TP2_RZLED	O	H	Control output terminal for Tape 2 recording or Zone 2 LED.

No.	Function	I/O	Act.	Description
51	TP1_RZLED	O	H	Control output terminal for Tape 1 recording or Zone 2 LED.
52	FM_RZLED	O	H	Control output terminal for FM recording or Zone 2 LED.
53	AM_RZLED	O	H	Control output terminal for AM recording or Zone 2 LED.
54	PHO_RZLED	O	H	Control output terminal for Phono recording or Zone 2 LED.
55		O	0	Not used.
56	STBY/RECV	O	L	Control output terminal for Standby/Received indicator.
57		O	0	Not used.
58	VD5_SLED	O	H	Control output pin for Video 5 indicator.
59	VD4_SLED	O	H	Control output terminal for Video 4 indicator.
60	VD3_SLED	O	H	Control output terminal for Video 3 indicator.
61	VD2_SLED	O	H	Control output terminal for Video 2 indicator.
62	VCC			Power supply terminal. Connect to 5V.
63	VDST	O	H	Chip selection output terminal for video function switch.
64	VSS			Ground terminal.
65	VD1_SLED	O	H	Control output terminal for Video 1 indicator.
66	DVD_SLED	O	H	Control output terminal for DVD indicator.
67	CD_SLED	O	H	Control output terminal for CD indicator.
68	TP2_SLED	O	H	Control output terminal for Tape 2 indicator.
69	TP1_SLED	O	H	Control output terminal for Tape 1 indicator.
70	FM_SLED	O	H	Control output terminal for Video -1 indicator.
71	AM_SLED	O	H	Control output terminal for Video -1 indicator.
72	PHO_SLED	O	H	Control output terminal for Video -1 indicator.
73		O		Not used.
74		O		Not used.
75	SYSIN	I	H	Input terminal for RI code.
76	AREA1	I	H	Initializing input terminal 1 for tuner band
77	AREA2	I	H	Initializing input terminal 2 for tuner band
78	RESERVE4	I	H	Transfer request input terminal for main microprocessor.
79	~TEIDEN	I	L	Detection input terminal of power failure from main microprocessor.
80	~MAINREQ	I	L	transfer request input terminal for main microprocessor.
81	HPIN	I	H	It is impression KEY input terminal (A/D input of 0) as for 0V.
82	SYNCDET	I	H	External synchronizing signal input terminal for On-screen IC.
83	RZSVDET	I	H	S video signal detection input terminal for recording signal.
84	ISVDET	I	H	S video signal detection input terminal for input signal.
85	PWR_LED	O	H	Control output terminal for Power LED.
86	FLRST	O	L	Reset terminal for FL tube driver IC
87	DOOR_OP	I	L	Detection input terminal to open the door.
88	DOOR_CL	I	L	Detection input terminal to close the door.
89	SEL_RDS	I	H	Initializing input terminal for RDS broadcast
90	SEL_AMP	I	H	Initializing input terminal for main amplifier
91	SEL_12V	I	H	Initializing input terminal for 12V trigger
92	SEL_NTSC	I	H	Initializing input terminal for NTSC.
93	KEY3	I		Operation key 1 connection input terminal
94	KEY2	I		Operation key 2 connection input terminal
95	KEY1	I		Operation key 3 connection input terminal
96	VSS			Power supply terminal for AD converter. Connect to ground terminal.
97	KEY0	I		Operation key 0 connection input terminal
98	VREF			Reference voltage input terminal for AD converter.
99	VCC			Power supply terminal for AD converter.
100		O	0	Not used.

PC BOARD CONNECTION VIEW



BLOCK DIAGRAM



PRINTED CIRCUIT BOARD PARTS LIST

NOTE: <UDD> 120 V model only
<UDT> Asian model only for 120 V
<UPT> Asian model only for 230 V
<UPP> European model only
<UGT> 220 V model only
<UJJ> Japanese model only

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

U1

INPUT/OUTPUT SELECTOR PC BOARD (NAAF-6813-1F/1G)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q3000 ,Q3020	22241448R2	NJM4580M-D
Q3022 ,Q3024 ,Q4002	22241448R2	NJM4580M-D
Q3030 ,Q4010	22240943R2	TC9163AF
Q3040 ,Q4020	22241221R2	TC9164AF
Q4000 ,Q4006	22241472R2	NJM2114M-D
Q4200 ,Q4202	22241472R2	NJM2114M-D
Q4204 ,Q4206	22241472R2	NJM2114M-D
Q4210 ,Q4212	22241444R2	TC9482F
Q4214 ,Q4216	22241444R2	TC9482F
Q4300 ,Q4306	22241450R2	NJM2082M-D
Q4310 ,Q4316	22241449R2 or 22241409R2	NJM5532M-D or BA15532F
Q4320 ,Q4326	22241451R9	NJU7306G
	Transistors	
Q4500 -Q4507	2213631 or 2213632	RN1241-A or RN1241-B
Q4510 -Q4517	2213631 or 2213632	RN1241-A or RN1241-B
	Diode	
D4700	224490510R2	UDZ5.1B
	Capacitors	
C3000 C3001	374721015	100 pF ±10 %, 50 V, Plastic
C3002,C3003	393384707	47 μF, 50 V, Elect.
C3006 ,C3007	393381017	100 μF, 50 V, Elect.
C3008,C3009	374726824	6800 pF ±5 %, 50 V, Plastic
C3010,C3011	374721824	1800 pF ±5 %, 50 V, Plastic
C3012 ,C3013	393384707	47 μF, 50 V, Elect.
C3020 -C3025	374721015	100 pF ±10 %, 50 V, Plastic
C3026 ,C3027	393884707	47 μF, 50 V, Elect.
C3028 -C3031	393384707	47 μF, 50 V, Elect.
C3110 -C3113	393344707	47 μF, 16 V, Elect.
C3116,C3117	393344717	47 μF, 16 V, Elect.
C4000 -C4003,C4006	363153304	33 pF ±5 %, 500 V, Plastic
C4007-C4357	374721024	33 pF ±5 %, 500 V, Plastic
C4100 ,C4101	393884707	47 μF, 50 V, Elect.
C4110 -C4111	355744709	47 μF, 16 V, Elect.
C4114 -C4115	355744709	47 μF, 16V, Elect.
C4120,C4121	393384707	47 μF, 50 V, Elect.
C4122 -C4123	355744709	47 μF, 16V, Elect.
C4126 -C4127	393384707	47 μF, 50 V, Elect.
C4200 ,C4201	393884707	47 μF, 50 V, Elect.
C4202 -C4205	393384707	47 μF, 50 V, Elect.
C4206 ,C4207	393884707	47 μF, 50 V, Elect.
C4210 ,C4211	393884707	47 μF, 50 V, Elect.
C4212 -C4215	393384707	47 μF, 50 V, Elect.
C4216 ,C4217	393884707	47 μF, 50 V, Elect.
C4220 ,C4221	393880227	2.2 μF, 50 V, Elect.
C4222 -C4225	393380227	2.2 μF, 50 V, Elect.
C4226,C4227	393880227	2.2 μF, 50 V, Elect.
C4230 ,C4231	393884707	47 μF, 50 V, Elect.
C4232 -C4235	393384707	47 μF, 50 V, Elect.
C4236 ,C4237	393884707	47 μF, 50 V, Elect.
C4240 -C4246	363151002	10 pF ±5 %, 500 V, Plastic
C4247	374722224	2200 pF ±5 %, 50 V, Plastic
C4300 ,C4301	393884707	47 μF, 50 V, Elect.
C4306 ,C4307	393884707	47 μF, 50 V, Elect.
C4350 ,C4351,C4356	363153304	33 pF ±5 %, 500 V, Plastic
C4360,C4361,C4366	393341007	10 μF, 16 V, Elect.
C4370 -C4371,C4376	374721044	0.1 μF ±5 %, 50 V, Plastic
C4380,C4381,C4386	374724724	4700 pF ±5 %, 50 V, Plastic
C4500 ,C4501	393884707	47 μF, 50 V, Elect.
C4502 -C4505	393384707	47 μF, 50 V, Elect.
C4506 ,C4507	393884707	47 μF, 50 V, Elect.
C4510 -C4515	374723324	3300 pF ±5 %, 50 V, Plastic
C4608	393362217	220 μF, 35 V, Elect.
C4700	354721019	100 μF, 6.3 V, Elect.
	Sockets	
P3011B ,P3012B ,P3013B	25050678	NSCT-10P482
J3015B	25051096	NSCT-12P883
J4711B	25050282	NSCT-5P110
	Socket AS	
J4722A	2009990615	NSAS-18P0840
J4723A	2009990616	NSAS-19P0841
P8005	2009990595	NSAS-8P0808
P8006	2009990642	NSAS-22P0888
	Jacks	
P3001	25045615	NPJ-4PDRW422
P3002	25045618 or 25045318	NPJ-6PDRW425 or NPJ-6PDBL175
P3003	25045616 or 25045491	NPJ-4PDRW423 or NPJ-4PDBL308
P3004	25045623	NPJ-6PDRW430
	Bus bars	
P3031,P3611	27141754	BBL60
P4031,P4033 ,P4035	27141753	BBL60
P4032,P4034	27141754	BBL60
	Clamps	
P3120	27301394	HL-18-0
P8011,P8012	260224	CP-1S

U2

INPUT/OUTPUT TERMINAL PC BOARD (NAAF-6814-1F/1G)

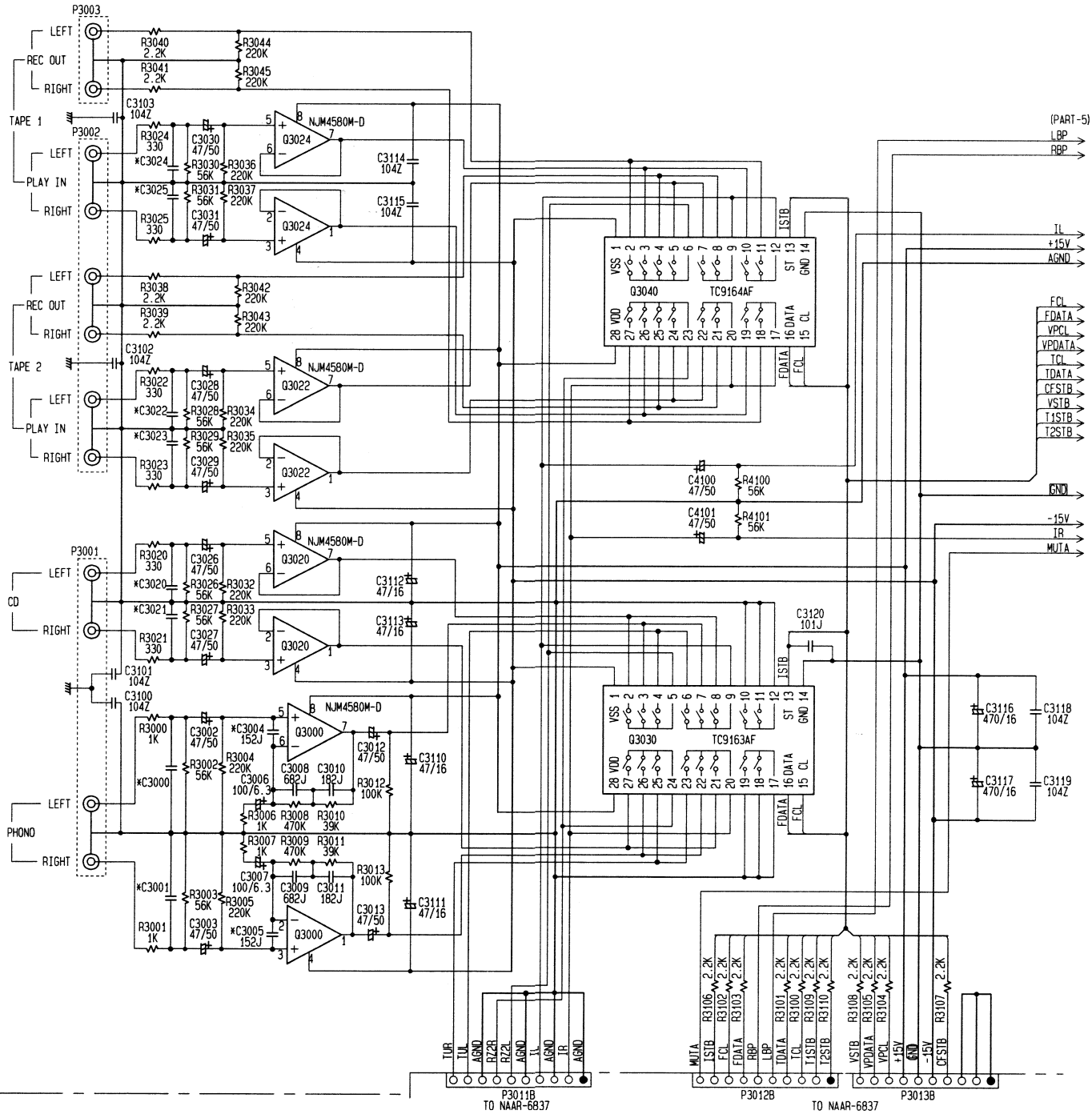
CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q3200 ,Q3202 ,Q3204	22241448R2	NJM4580M-D
Q3206 ,Q3208	22241448R2	NJM4580M-D
Q3210 ,Q3400	22241448R2	NJM4580M-D
Q3220	22240829	TC9274N-008
	Transistor	
Q3410 -Q3413	2213631 or 2213632	RN1241-A or RN1241-B
	Capacitors	
C3200 -C3211	374721015	100pF ±10 %, 50 V, Plastic
C3212 ,C3213	393884707	47 μF, 50 V, Elect.
C3214 -C3223	393384707	47 μF, 50 V, Elect.
C3310 ,C3311	393344707	47 μF, 16 V, Elect.
C3314 ,C3315	393344707	47 μF, 16 V, Elect.
C3400 -C3403	393384707	47 μF, 50 V, Elect.
C3404 ,C3405	374721024	1000 pF±5 %, 50 V, Plastic
C4516	374723324	3300 pF±5 %, 50 V, Plastic
C4517	374721044	0.1 μF±5 %, 50 V, Plastic
	Sockets	
J4711A	25051109	NSCT-5P896
P3061B, P3062B	25050675	NSCT-7P479
	Jacks	
P3201-P3203	25045318 or 25045618	NPJ-6PDBL175 or NPJ-6PDRW425
P3204	25045613 or 25045614	NPJ-4PDB420 or NPJ-4PDB421

SCHEMATIC DIAGRAM 1

NAAF-6813 (1/2)

U1 INPUT/OUTPUT SELECTOR SCHEMATIC DIAGRAM (NAAF-6813)

*	C3000, C3001	C3004, C3005	C3020-C3025
UJ/JAPAN	101K	NO	101K
UD/USA, ASIA	101K	NO	101K
UG/ASIA	221K	YES	471J
UP/EUROPE, ASIA	221K	YES	471J



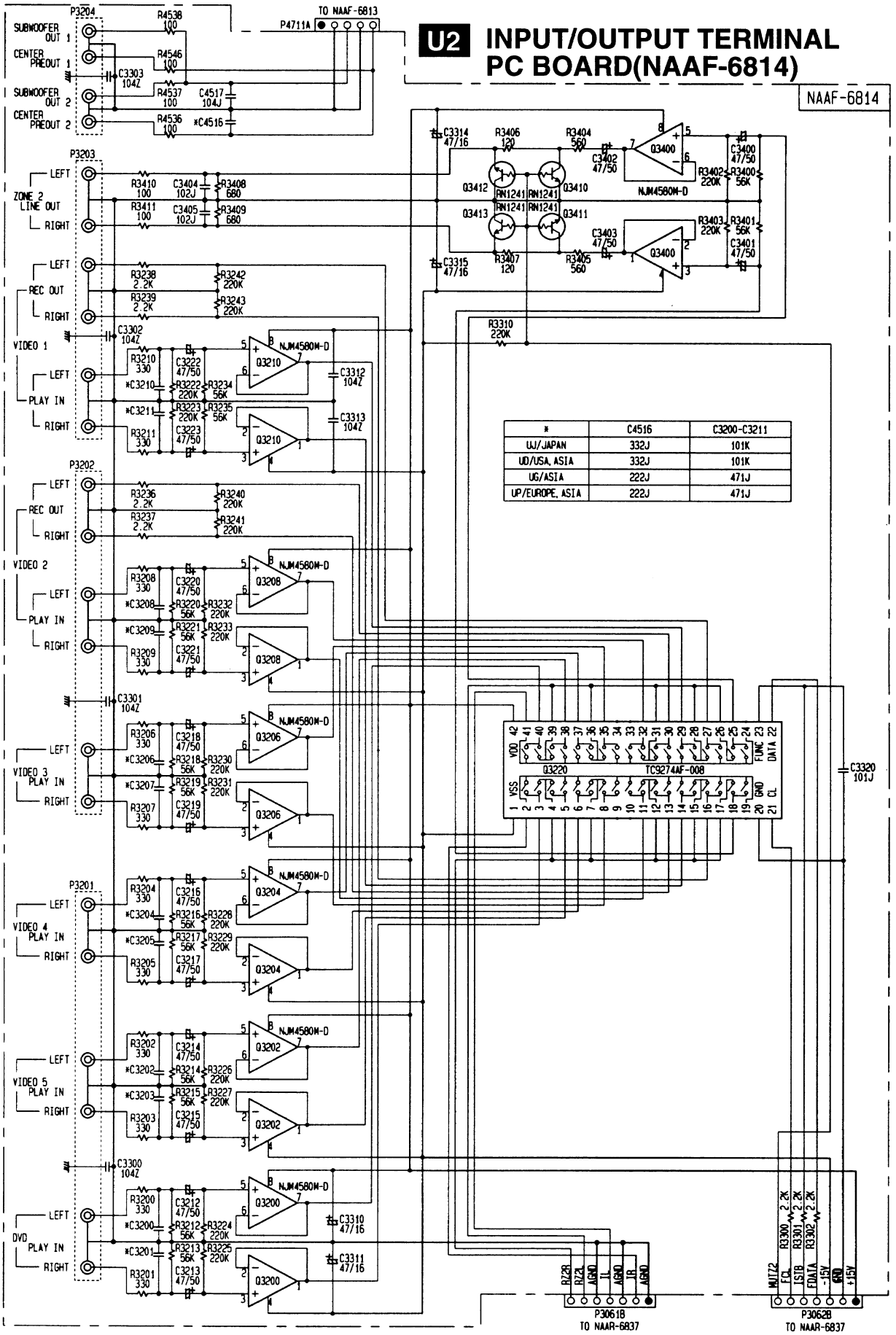
SCHEMATIC DIAGRAM 2

U1 INPUT/OUTPUT SELECTOR SCHEMATIC DIAGRAM (NAAF-6813)

¥	C4510-C4515
UJ/JAPAN	332J
UD/USA, ASIA	332J
UG/ASIA	222J
UP/EUROPE, ASIA	222J

SCHEMATIC DIAGRAM 3

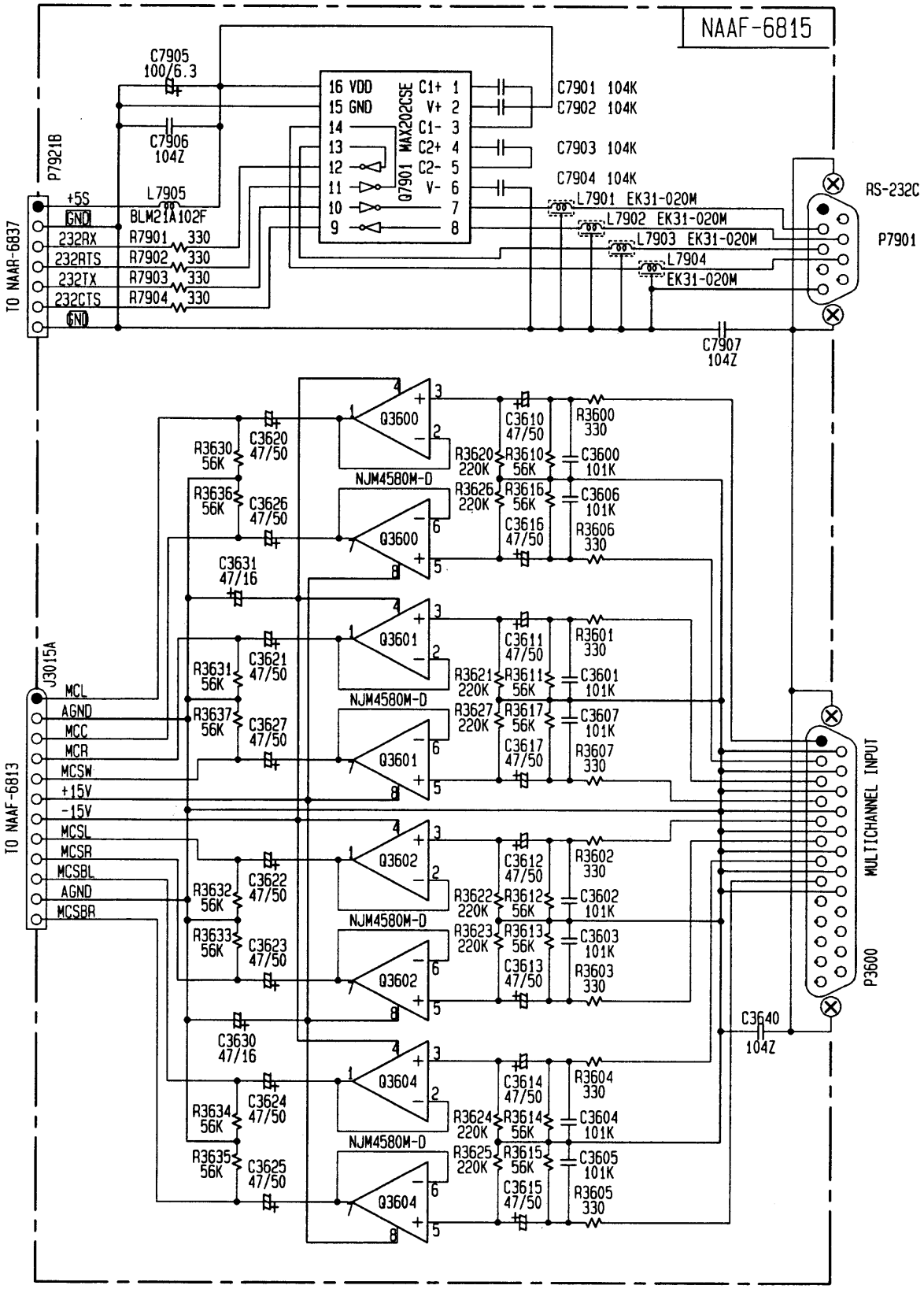
U2 INPUT/OUTPUT TERMINAL PC BOARD(NAAF-6814)



*	C4516	C3200-C3211
UJ/JAPAN	332J	101K
UD/USA, ASIA	332J	101K
UG/ASIA	222J	471J
UP/EUROPE, ASIA	222J	471J

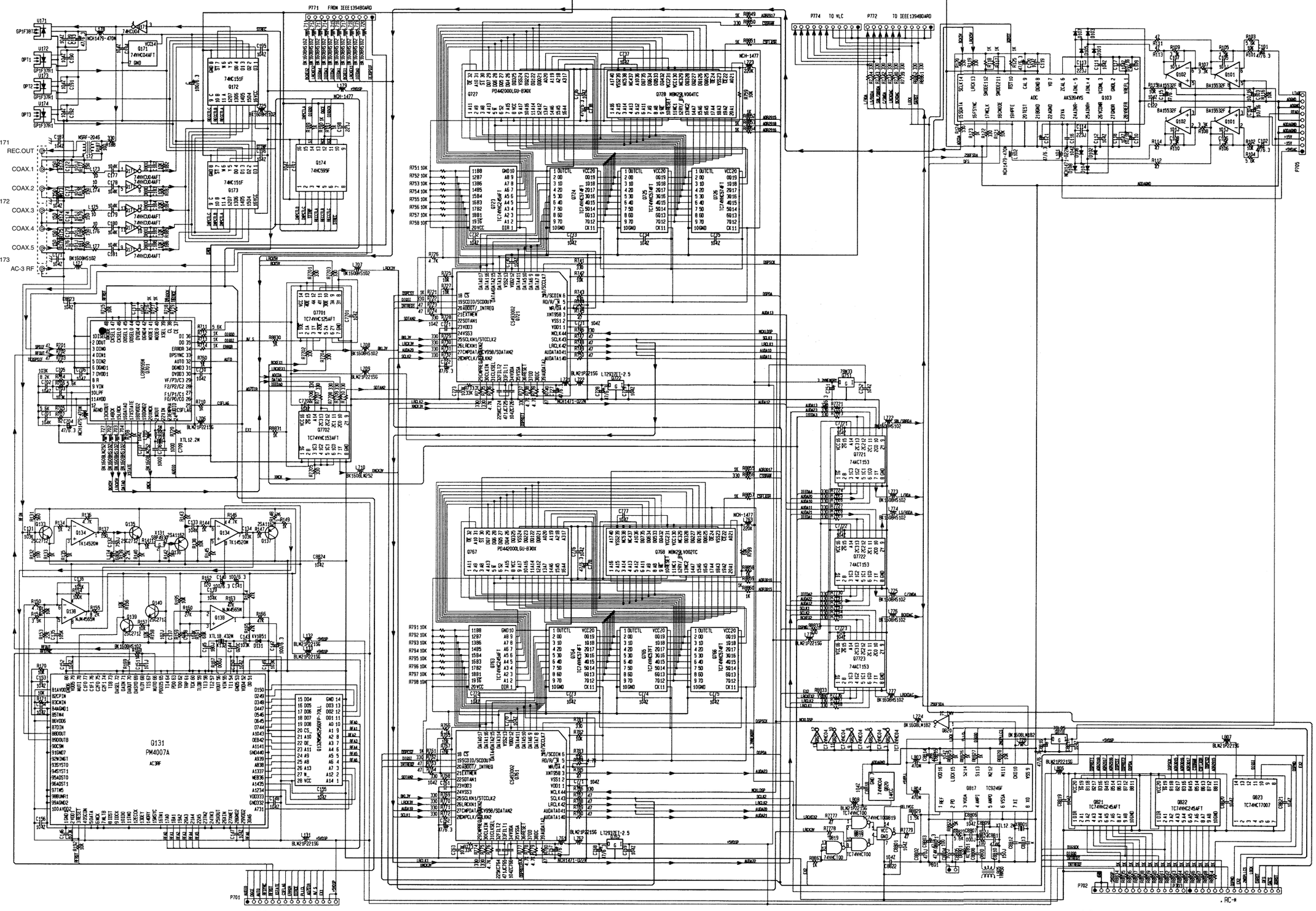
SCHEMATIC DIAGRAM 4

U3 MULTI CHANNEL INPUT TERMINAL SCHEMATIC DIAGRAM (NAAF-6815)



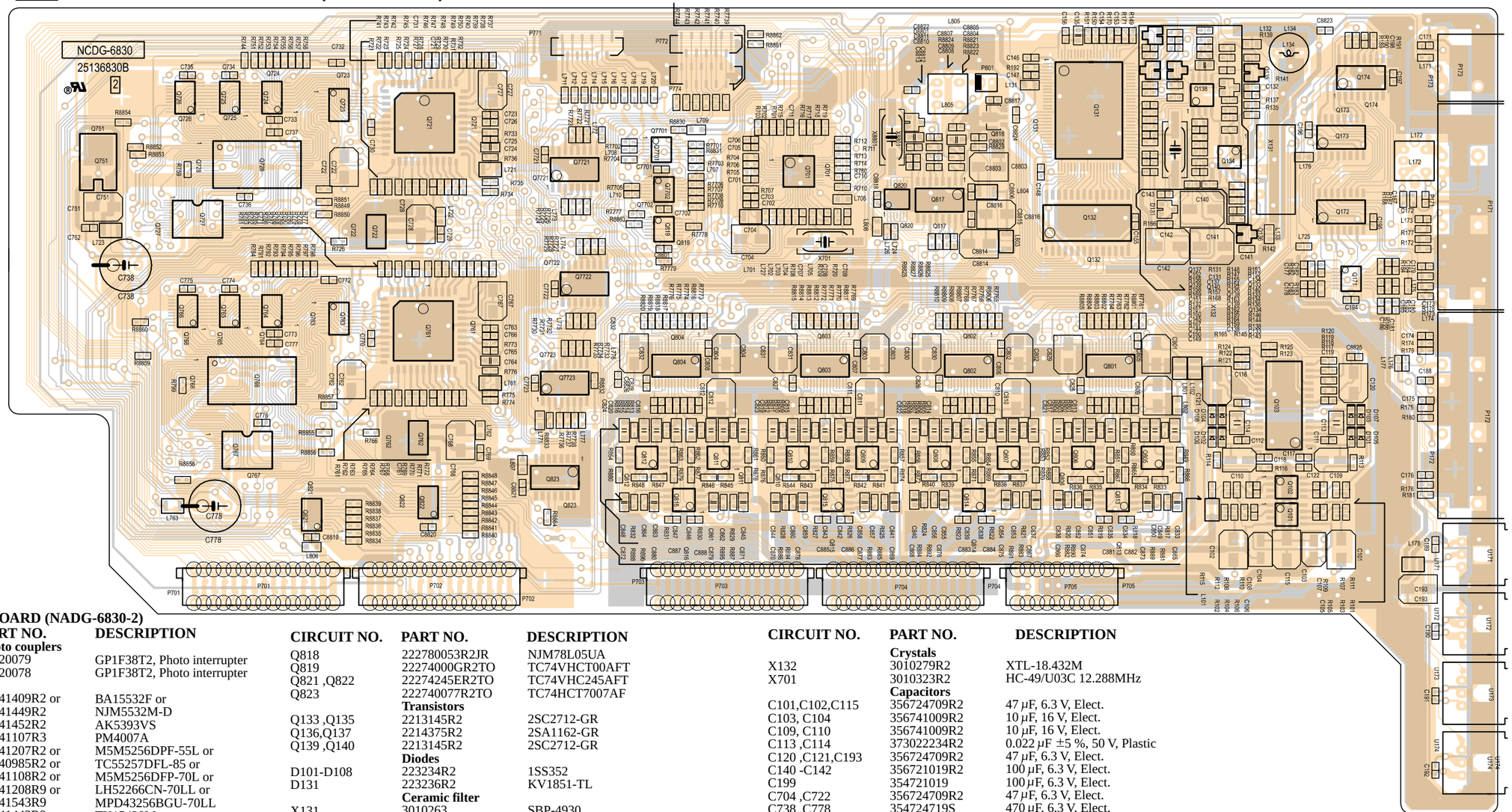
SCHEMATIC DIAGRAM 5

U4 DSP CIRCUIT SCHEMATIC DIAGRAM (NADG-6830)



PRINTED CIRCUIT BOARD VIEW 4

U4 DSP CIRCUIT PC BOARD (NADG-6830)



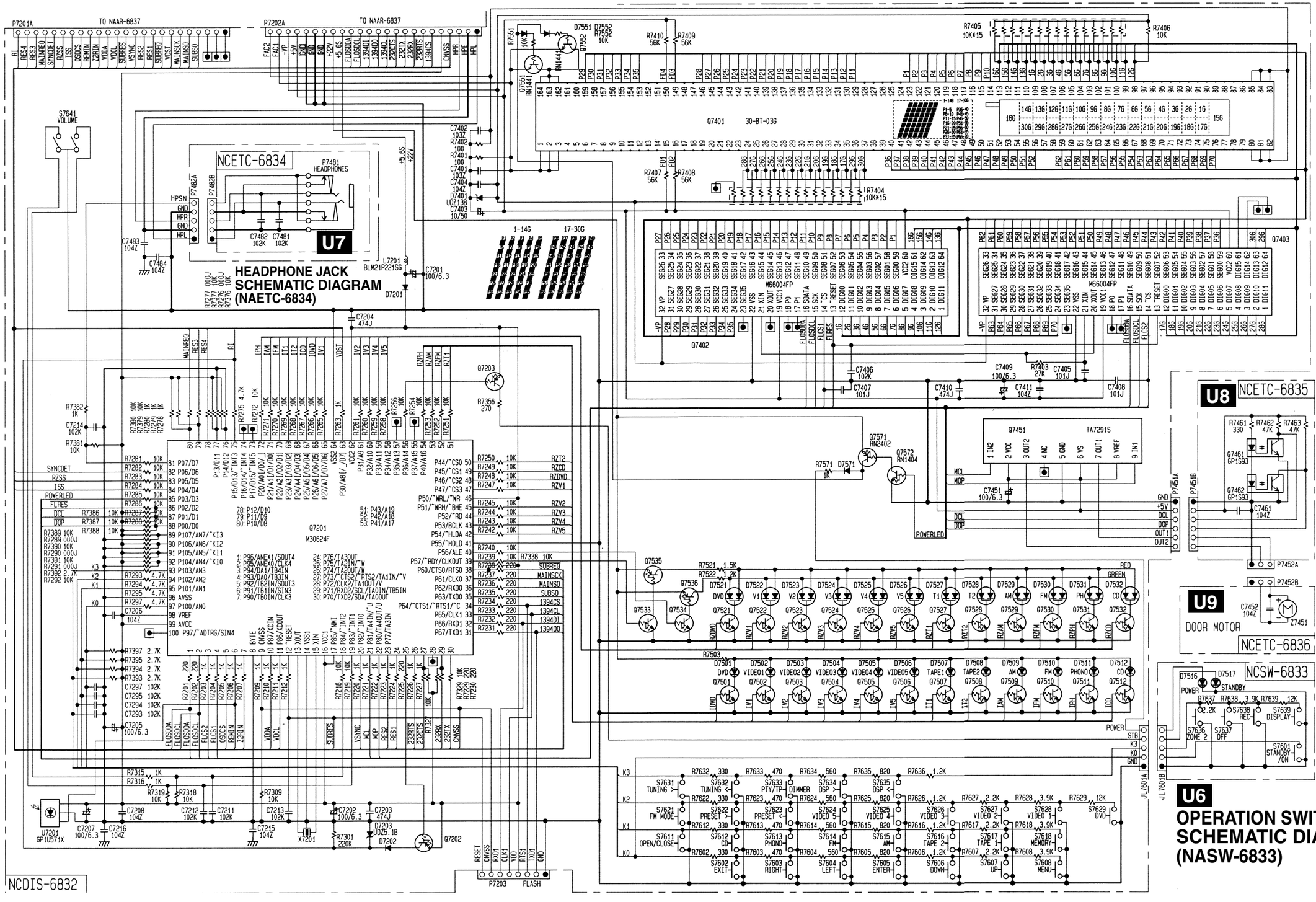
U4

DSP CIRCUIT PC BOARD (NADG-6830-2)

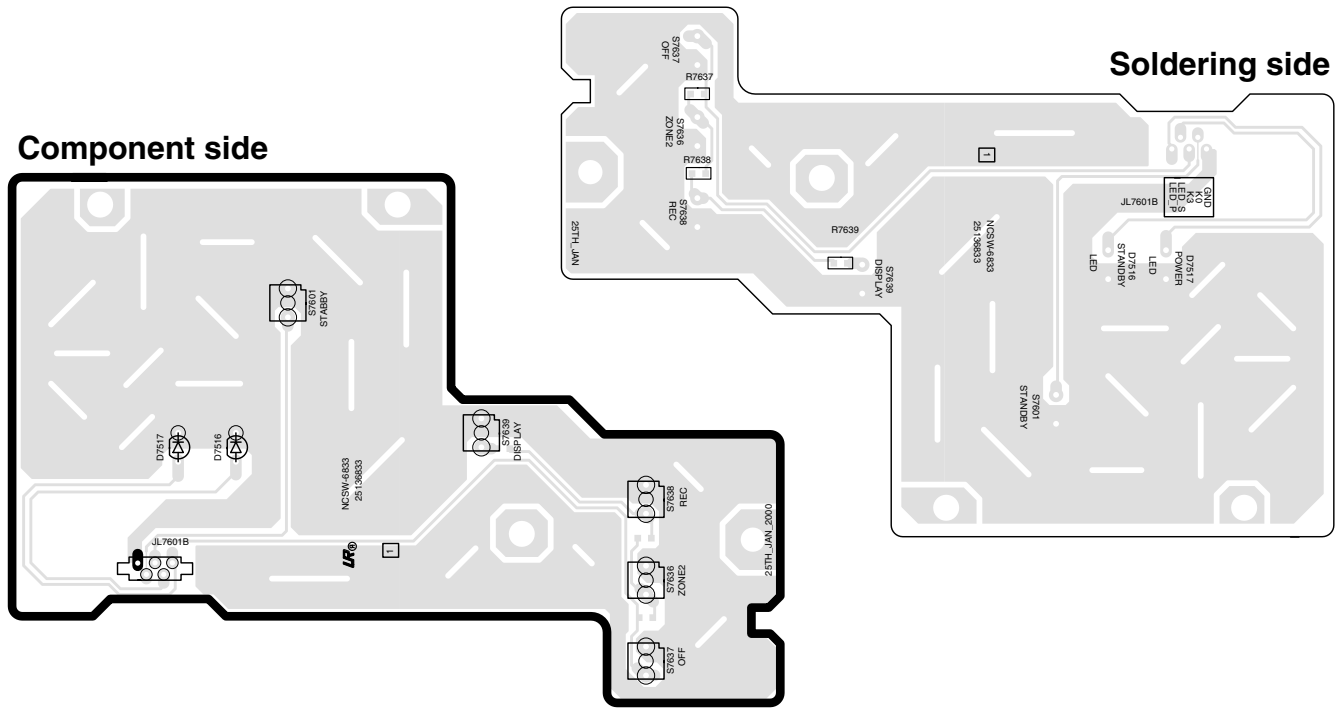
CIRCUIT NO.	PART NO.	DESCRIPTION
	Photo couplers	
U171	24120079	GP1F38T2, Photo interrupter
U172-U174	24120078	GP1F38T2, Photo interrupter
	ICs	
Q101,Q102	22241409R2 or	BA15532F or
	22241449R2	NJM5532M-D
Q103	22241452R2	AK5393VS
Q131	22241107R3	PM4007A
Q132	22241207R2 or	M5M5256DPF-55L or
	22240985R2 or	TC55257DFL-85 or
	22241108R2 or	M5M5256DFP-70L or
	22241208R9 or	LH52266CN-70LL or
	22241543R9	MPD43256BGU-70LL
Q134	22241443R2	TK15420M
Q138	22241383R2	NJM4565M-D
Q171 ,Q820	22274004HR2TO	TC74VHCU04FT
Q172,Q173	222741515R2TO	TC74HC151F
Q174	222745955R2	74HC595F
Q701	22241454R3	LC89055W-RA8
Q721	22241456R9	CS493002-CL
Q722 ,Q762	22241468R2	LM2937IMP-2.5
Q723	22274245ER2TO	TC74VHC245AFT
Q724-Q726	22274574ER2TO	TC74VHC574FT
Q727 ,Q767	22241459R3	MPD442000LGU-B70X
✱ Q728 ,Q768	22241530R3 or	MBM29LV008TA-90PTN or
	22241457R3	MBM29LV004TC-90PTN
Q751	22278033ER2NEC	MPC29M33T
Q764-Q766	22274574ER2TO	TC74VHC574FT
Q768	22241458R3	MBM29LV002TC-90PTN
Q7701	22274125ER2TO	TC74VHC125FT
Q7702	22274153ER2TO	TC74VHC153FT
Q7721 -Q7723	22274153AR2TO	TC74ACT153F
Q817	22240928R2	TC9246F
Q818	222780053R2JR	NJM78L05UA
Q819	22274000GR2TO	TC74VHCT00AFT
Q821 ,Q822	22274245ER2TO	TC74VHC245AFT
Q823	222740077R2TO	TC74HCT7007AF
	Transistors	
Q133 ,Q135	2213145R2	2SC2712-GR
Q136,Q137	2214375R2	2SA1162-GR
Q139 ,Q140	2213145R2	2SC2712-GR
	Diodes	
D101-D108	223234R2	1SS352
D131	223236R2	KV1851-TL
	Ceramic filter	
X131	3010263	SBP-4930
	Coils	
L101,L721,L761	231237M022R2	NCH-1471, Choke coil
L102 L178,L701	231237K470R2	NCH-1479, Choke coil
L131 -L133	230949R2	BLM21P221SG Choke coil
L134	233493K680S	NCH-1487 680K, Choke coil
L171, L725	230955R2	BK1608HS102-T, EMI filter
L172	232136	NSRF-2046, MPX coil
L179	233454K220	NCH-1452 220K, Choke coil
L702 -L704	230955R2	BK1608HS102-T, EMI filter
L705 ,L710 ,R169	230956R2	BK1608LM252-T, EMI filter
L706,L709 ,L722	230949R2	BLM21P221SG, choke coil
L707 ,L708	230955R2	BK1608HS102-T, EMI filter
L711-L720	230955R2	BK1608HS102-T, EMI filter
L723 -L763	231237K220R2	NCH-1477, choke coil
L724,L726	230958R1	BK1608LM182-T,EMI filter
L762,L771	230949R2	BLM21P221SG, Choke coil
L772-L777	230959R1	BK1608LL241-T,EMI filter
L803 ,L804	231237K470R2	NCH-1479, Choke coil
L806,L807,L808	230949R2	BLM21P221SG, choke coil
	Crystals	
X132	3010279R2	XTL-18.432M
X701	3010323R2	HC-49/U03C 12.288MHz
	Capacitors	
C101,C102,C115	356724709R2	47 µF, 6.3 V, Elect.
C103, C104	356741009R2	10 µF, 16 V, Elect.
C109, C110	356741009R2	10 µF, 16 V, Elect.
C113 ,C114	373022234R2	0.022 µF ±5 %, 50 V, Plastic
C120 ,C121,C193	356724709R2	47 µF, 6.3 V, Elect.
C140 -C142	356721019R2	100 µF, 6.3 V, Elect.
C199	354721019	100 µF, 6.3 V, Elect.
C704 ,C722	356724709R2	47 µF, 6.3 V, Elect.
C738 ,C778	354724719S	470 µF, 6.3 V, Elect.
C767 ,C768	356724709R2	47 µF, 6.3 V, Elect.
C8803 ,C8814,C8816	356724709R2	47 µF, 6.3 V, Elect.
	Jacks	
P171,P172	25045624	NPJ-3PDO431
P173	25045477	NPJ-1PDBL295
	Sockets	
P701-P704	25050683	NSCT-15P487
P705	25050678	NSCT-10P482
P771A,P772A, P774A	25052439R2	NSCT-11P2336

SCHEMATIC DIAGRAM 6

U5 DISPLAY & SUB-MICROPROCESSOR SCHEMATIC DIAGRAM (NADIS-6832)



U6 OPERATION SWITCH PC BOARD (NASW-6833)



U5

DISPLAY & SUB MICROPROCESSOR PC BOARD (NADIS-6832-1F/1G/1H/1I)

CIRCUIT NO.	PART NO.	DESCRIPTION
	FL tube	
Q7401	212208	30-BT-03G
	Remote sensor	
U7201	241329	PIC-26043TH2
	ICs	
Q7201	22241363S989	M30624FGFP or
	22241512S989	M30624FGAFP
Q7402	22240685R9	M66004FP
Q7403	22240685R9	M66004FP
Q7451	22240239	TA7291S
	Transistors	
Q7202,Q7203	2214540R2	RN2403
Q7501-Q7512	2214470R2	RN1402
Q7521-Q7532,Q7572	2214470R2	RN1402
Q7533 ,Q7534	2214490R2	RN1404
Q7535,Q7536 ,Q7571	2214540R2	RN2403
Q7551	2213631 or	RN1241-A or
	2215410R2	RN1441
	Diodes	
D7201,D7202	223234R2	1SS352
D7203	224490510R2	UDZ5.1B, Zener diode
D7401	224491300R2	UDZ13B, Zener diode
D7501-D7512 ,D7517	225374	SEL2E10C, LED
D7521-D7532	225375	SML1216C, LED
D7551,D7552,D7571	223269R2 or	1SS355 or
	223234R2	1SS352
	Coils	
L7201	231237M022R2	NCH-1471, Choke coil
L7202	231237K220R2	NCH-1477, Choke coil
R7201,R7202	230921R2	BLM21B222SPT, Choke coil
	Oscillator	
X7201	3010322	CST16.00MXW0C1
	Capacitors	
C7201,C7202	355721019	100 μF, 6.3 V, Elect.
C7203,C7204,C7410	375524744	0.47 μF ± 5 %, 50V, MMT
C7205 ,C7207	355721019	100 μF, 6.3 V, Elect.
C7403	355781009	10 μF, 50 V, Elect.
C7409,C7451	355721019	100 μF, 6.3 V, Elect.
C7412 -C7414	375524744	0.47 μF ± 5 %, 50V, MMT
	Resistors	
R7504	453530474	4.7 Ω ± 5 %, 1/2 W, Metal oxide
R7404, R7405	49163103415	RM1/10IJ-10Kx15, Array

CIRCUIT NO.	PART NO.	DESCRIPTION
	Socket AS	
P7451A	2002E391215	NSAS-12P0796
P7482A	2009990587UL	NSAS-10P0798
	Switches	
S7602 -S7608	25035699	NPS-111-S662
S7611-S7618	25035699	NPS-111-S662
S7621-S7629	25035699	NPS-111-S662
S7631-S7635	25035699	NPS-111-S662
	Rotary encoder	
S7641	25065596	EC16B36C25
	Sockets	
JL7601A	25051089	NSCT-5P876, Wire holder
P7201,P7202	25052220	NSCT-24P2117
	FL holder	
Q7401A	27190987	Holder

U6

OPERATION SWITCH PC BOARD (NASW-6833-1F/1G/1H/1I)

CIRCUIT NO.	PART NO.	DESCRIPTION
	LEDs	
D7516	225290	SEL4110R, LED
D7517	225374	SEL2E10C, LED <UDD>
	Switches	
S7601,S7636 - S7639	25035699	NPS-111-S662
	Holder	
JL7601B	25051089	NSCT-5P876, Wire holder

U7

HEAD PHONE JACK PC BOARD (NAETC-6834-1F/1G/1H/1I)

CIRCUIT NO.	PART NO.	DESCRIPTION
P7481	25045385	YKB26-5153, Phones
P7482B	25055369	NPLG-5P352, plug

U8

DOOR MOTOR DRIVER CIRCUIT PC BOARD (NAETC-6835-1F/1G/1H/1I)

CIRCUIT NO.	PART NO.	DESCRIPTION
Q7461,Q7462	24120081	GP1S93, Photo coupler
P7451B	25055370	NPLG-6P353, plug
P7452	200EE390615	NSAS-6P0795, socket AS

U10

MAIN MICROPROCESSOR PC BOARD (NAAR-6837-1F/1G/1H)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q1502	22241297R2	BU1923F <UPP>
Q1701	222780125JRCW	NJM78M12FA
Q1702	222780053JRC	NJM78L05A
Q2901	22240981R2	TC9162AF
Q4801	22241383R2	NJM4565M-D
Q4821	22241449R2 or	NJM5532M-D or
	22241409R2	BA15532F
Q7001	22241363M989	M30624FGFP or
	22241512M989	M30624FGAFP
Q9203	222780155MIT	M5F78M15L
Q9231	222780565JRC	NJM78M56FA
Q9232,Q9323	222780055JRC	NJM78M05FA
	Transistors	
Q1501,Q7102	2213143R2	2SC2712-O <UPP>
Q4803-Q4806	2215410R2	RN1441
Q7002	2214490R2	RN1404
Q7101,Q7103,Q7105	2214530R2	RN2402
Q7106	2213143R2	2SC2712-O
Q9221	2211644 or	2SA965-Y or
	2211643	2SA965-O
	Diodes	
D7001,D7002,D7004	223234R2	1SS352
	223269R2	1SS355
D7003	224490620R2	UDZ6.2B
D7005,D7006	223269R2	1SS355
	223234R2	1SS352
D9221,D9222	22380035	GP104003E
	22380260	RL1N4003
D9223	224493300R2	UDZ33B
D9231 -D9233	22380035	GP104003E
	22380260	RL1N4003
D9251-D9254	223269R2	1SS355
	223234R2	1SS352
	Coils	
L1501,L7001	231237M022R2	NCH-1471 <UPP>
	Oscillators	
X1501	3010321	HC-49/U034.332MHz <UPP>
X7001	3010322	CS16.00MXW0C1
	Capacitors	
C1503	355721019	100 µF, 6.3 V, Elect.<UPP
C1505	354721019	100 µF, 6.3 V, Elect. <UPP>
C1512,C7025	354780339	3.3 µF, 50 V, Elect.
C1521,C1702,C1704	354741009	10 µF, 16 V, Elect.
C4801-C4808	354741009	10 µF, 16 V, Elect.
C7001-C7002	354721019	100 µF, 6.3 V, Elect.
C7007	354780109	1 µF, 50 V, Elect.
C7009	3000078	DX-5R5L104, Super capacitor
C7010	375524744	0.47 µF ±5 %, 50 V, MM
C7012	354722219	220 µF, 6.3 V, Elect.
C7101-C7103	354741009	10 µF, 16 V, Elect.
C9213	353741009	10 µF, 16 V, Elect.
C9221,C9222	354781019	100 µF, 50 V, Elect.
C9223,C9224	354780229	2.2 µF, 50 V, Elect.
C9234,C9235,C9251	354741019	100 µF, 16 V, Elect.
C9301,C9302	374723344S	0.33 µF ±5 %, 50 V, Plastic
C9326	353780229	2.2 µF, 50V, Elect.
	Resistors	
R2904	49163103406	RM1/10IJ-10k x 6, Array
R9207,R9306 ,R9321	452730394F	3.9 Ω±5 %, 2 W, Meal oxide
R9211,R9309,R9324	453532294	0.22 Ω±5 %, 1/2 W, Meal oxide
R9222	453530824	8.2 Ω±5 %, 1/2 W, Meal oxide
R9232,R9233	443522204	22 Ω±5 %, 1/2 W, Meal oxide
R9303,R9203	452730394F	3.9 Ω±5 %, 2 W, Meal oxide
	Sockets	
P1201A	25052211	NSCT-15P2108
P7201,P7202	25052220	NSCT-24P2117
JL2711A	25051090	NSCT-6P877, Wire holder
	Plugs	
JL8002B	25055625	NPLG-4P587
JL9221B	25055626	NPLG-5P588
JL9222B	25055631	NPLG-10P593
P2011A,P2013A	25055412	NPLG-10P394
P2012A,P3001A	25055409	NPLG-7P391
P2511A-P2513A	25055412	NPLG-10P394
P4001A-P4003A,P7007A	25055412	NPLG-10P394
P7001A-P7003A	25055417	NPLG-15P399
P7006A,P9212A,P9312A	25055417	NPLG-15P399
P7101A,P7102A	25055704	NPLG-8P660
	Radiators	
Q9203A	27160466	RAD-136
Q9231A	27160357	S3, Radiator
Q9323A	27160209	RAD-67
	Screws	
Q9203B,Q9323B	82143010	3P+10FN(BC)
Q9231B,Q9232B	838430088	3B+8B(BC)

U11

RECTIFIER CIRCUIT PC BOARD (NAPS-6838-1F/1G/1H)

CIRCUIT NO.	PART NO.	DESCRIPTION
	IC	
Q9202	222790155MI	M5F79M15L
	Diode	
D9201	22380022F or	RBV402 or
	22380285F	RS403M
	Capacitors	
C9201,C9202	374723344S	0.33 µF ±5%, 50 V, Plastic
C9205-C9211	394062227S	2200 µF, 35 V, Elect.
C9214	353780229	2.2 µF, 50 V, Elect.
C9216	353741009	10 µF, 16 V, Elect.
C9231	354751029S	1000 µF, 25 V, Elect.
	Thermistor	
R9201,R9202	4000197	RUE700
	Resistors	
R9208,R9210	452730394F	3.9 Ω±5 %, 2 W, Meal oxide
R9221	453530824	8.2 Ω±5 %, 1/2 W, Meal oxide
R9231	453532294	0.22 Ω±5 %, 1/2 W, Meal oxide
R9401	453530224	2.2 Ω±5 %, 1/2 W, Meal oxide
	Plug	
P9211	25055177	NPLG-5P161
	Socket	
P9212	25050683	NSCT-15P487

U12

CONSTANT VOLTAGE CIRCUIT PC BOARD (NAPS-6839-1F/1G/1H)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q9302	222780053JRC	NJM78L05A
Q9303,Q9322	222790055JRC	NJM79M05FA
Q9304	222780055JRC	NJM78M05FA
	Transistor	
Q9301	2202176	2SB1370-F
	Diode	
D9301	22380022F or	RBV402 or
	22380285F	RS403M
	Capacitors	
C9305-C9309	394043327S	3300 µF, 16 V, Elect.
C9311,C9314	353741009	10 µF, 16 V, Elect.
C9312,C9323	353780229	2.2 µF, 50 V, Elect.
C9316,C9325	353741009	10 µF, 16 V, Elect.
	Thermistor	
R9301-R9302	4000197	RUE700
	Resistors	
R9305	453530474	4.7 Ω±5 %, 1/2W, Meal oxide
R9307	453532294	0.22 Ω±5 %, 1/2W, Meal oxide
R9322	452730394F	3.9 Ω±5 %, 2W, Meal oxide
	Plug	
P9311	25055175	NPLG-3P159
	Socket	
P9312	25050683	NSCT-15P487

SCHEMATIC DIAGRAM 7

U10 MAIN MICROPROCESSOR SCHEMATIC DIAGRAM (NAAR-6837)

CONSTANT VOLTAGE CIRCUIT PC BOARD (NAPS-6839)

RECTIFIER CIRCUIT PC BOARD (NAPS-6838)

U12

U11

TO DSP BOARD

TUNER PACK

TO AF1

TO AF2

COMPONENT

TO VIDEO BOARD

TO S-VIDEO

TO RS232C

U13

VIDEO CIRCUIT PC BOARD (NAVD-6848-1F/1G)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q2001,Q2002	222740515R2	74HC4051AF
Q2011,Q2111,Q2151	22241441R2	MAX4016ESA
Q2171, Q2521	22241441R2	MAX4016ESA
Q2201	22241037	LC74761-9189
Q2202	222740525R2	74HC4052AF
Q2951	22240943R2	TC9163AF
Q2952	22241221R2	TC9164AF
	Transistors	
Q2012,Q2022,Q2101	2213145R2	2SC2712-GR
Q2013,Q2023,Q2113	2214375R2	2SA1162-GR
Q2041-Q2046	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q2053-Q2056	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q2061-Q2064	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q2071-Q2074	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q2112,Q2121,Q2132	2213145R2	2SC2712-GR
Q2133,Q2253,Q2513	2214375R2	2SA1162-GR
Q2141,Q2161,Q2181	2213145R2	2SC2712-GR
Q2182,Q2192	2214490R2	RN1404
Q2191,Q2203,Q2252	2213145R2	2SC2712-GR
Q2512,Q2522,Q2612	2213145R2	2SC2712-GR
Q2523,Q2613,Q2623	2214375R2	2SA1162-GR
Q2571,Q2572	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q2622	2213145R2	2SC2712-GR
Q2641-Q2643	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q2652,Q2653	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
	Diodes	
D2011,D2012	223234R2	1SS352
D2021,D2022	223234R2	1SS352
D2111,D2112	223234R2	1SS352
D2131,D2132	223234R2	1SS352
D2181,D2182	223234R2	1SS352
D2191,D2192	223234R2	1SS352
D2201,D2251,D2252	223234R2	1SS352
D2521,D2522	223234R2	1SS352
D2621,D2622	223234R2	1SS352
	Coils	
L2201	231237K022R2	NCH-1471, Choke coil
L2202	231292J056R2	NCH-1572, Choke coil
	Crystals	
X2201	3010167	XTL-14.32M
X2202	3010238	XTL-17.73M <UPP,UPT,UGT>
	Capacitors	
C2011,C2021	354744719	470 μF, 16 V, Elect.
C2024	354741019	100 μF, 16 V, Elect.
C2111,C2113,C2114	354741019	100 μF, 16 V, Elect.
C2131,C2151,C2171	354741019	100 μF, 16 V, Elect.
C2173,C2174,C2212	354741019	100 μF, 16 V, Elect.
C2181,C2191,C2804	354741009	10 μF, 16 V, Elect.
C2182,C2192	354780229	2.2 μF, 50 V, Elect.
C2183,C2193,C2220	354784799	0.47 μF, 50 V, Elect.
C2209,C2216	354780109	1 μF, 50 V, Elect.
C2214	354783399	0.33 μF, 50 V, Elect.
C2215	374726824	6800 pF±5%, 50 V, Plastic
C2217	374722234	0.022 μF±5%, 50 V, Plastic
C2221,C2223,C2226	354741019	100 μF, 16 V, Elect.
C2222	375524744	0.47 μF±5%, 50 V, MMT
C2251,C2253,C2254	354741019	100 μF, 16 V, Elect.
C2521,C2621	354744719	470 μF, 16 V, Elect.
C2523,C2524	354741019	100 μF, 16 V, Elect.
C2951,C2952,C2023	354741009	10 μF, 16 V, Elect.
	Jacks	
P2001,P2002	25045566	NPJ-4PDYE381
P2003	25045363	NPJ-3PDYE208
P2011,P2013,P2521	25050678	NSCT-10P482
P2012	25050675	NSCT-7P479
P2024	25052259	NSCT-26P2156

U14

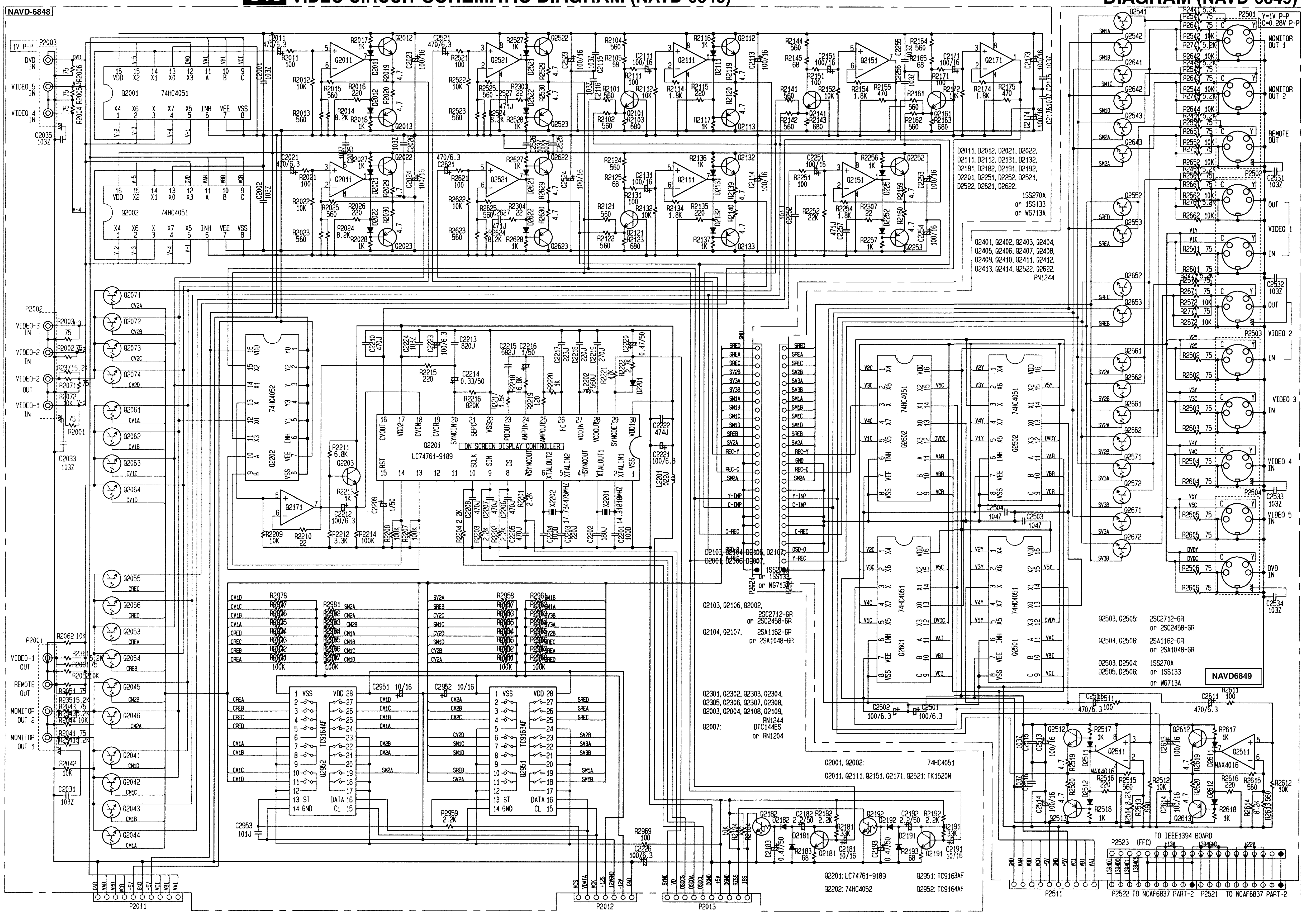
S VIDEO TERMINAL PC BOARD (NAVD-6849-1F/1G)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q2501,Q2502	222740515R2	74HC4051AF
Q2511	22241441R2	MAX4016ESA
Q2601,Q2602	222740515R2	74HC4051AF
	Transistors	
Q2541-Q2543	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q2552,Q2553	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q2561,Q2562	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q2661,Q2662	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
Q2671,Q2672	2216031R2 or	RN1444-A or
	2216032R2	RN1444-B
	Diodes	
D2511,D2512	223234R2	1SS352
D2611,D2612	223234R2	1SS352
	Capacitors	
C2501,C2502	354741019	100 μF, 16 V, Elect.
C2511,C2611	354744719	470 μF, 16 V, Elect.
C2513,C2514	354741019	100 μF, 16 V, Elect.
C2613,C2614	354741019	100 μF, 16 V, Elect.
	Sockets	
P2501-P2503	25051957	NSCT-12P1744
P2504	25051956	NSCT-8P1743
P2511,P2522	25050678	NSCT-10P482
P2523	25052253	NSCT-20P2150
P2524	25052259	NSCT-26P2156

SCHEMATIC DIAGRAM 8

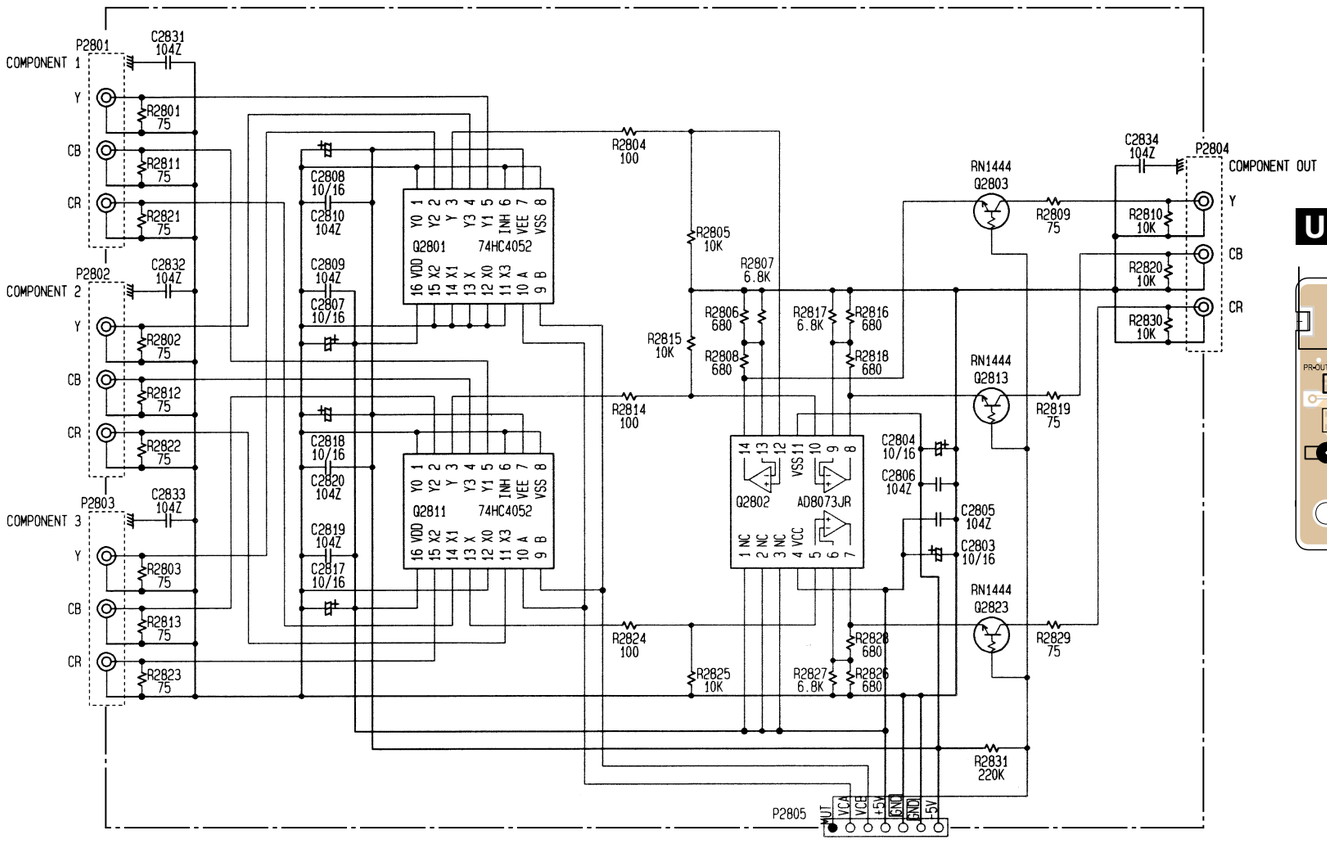
U13 VIDEO CIRCUIT SCHEMATIC DIAGRAM (NAVD-6848)

U14 S VIDEO TERMINAL SCHEMATIC DIAGRAM (NAVD-6849)


NAVD-6848
D2011, D2012, D2021, D2022, D2111, D2112, D2131, D2132, D2181, D2182, D2191, D2192, D2201, D2251, D2252, D2521, D2522, D2621, D2622: 1SS270A or 1SS133 or WG713A
Q2401, Q2402, Q2403, Q2404, Q2405, Q2406, Q2407, Q2408, Q2409, Q2410, Q2411, Q2412, Q2413, Q2414, Q2522, Q2622, RN1244
Q2103, Q2106, Q2002, 2SC2712-GR or 2SC2458-GR
Q2104, Q2107, 2SA1162-GR or 2SA1048-GR
Q2301, Q2302, Q2303, Q2304, Q2305, Q2306, Q2307, Q2308, Q2003, Q2004, Q2108, Q2109, RN1244
Q2007: DTC144ES or RN1204
Q2001, Q2002: 74HC4051
Q2011, Q2111, Q2151, Q2171, Q2521: TK1520M
Q2201: LC74761-9189
Q2202: 74HC4052
Q2951: TC9163AF
Q2952: TC9164AF
ON SCREEN DISPLAY CONTROLLER
Q2503, Q2505: 2SC2712-GR or 2SC2458-GR
Q2504, Q2506: 2SA1162-GR or 2SA1048-GR
D2503, D2504: 1SS270A
D2505, D2506: or 1SS133 or WG713A
NAVD6849
Y=1V P-P
C=0.28V P-P
MONITOR OUT 1
MONITOR OUT 2
REMOTE OUT
VIDEO 1 OUT
VIDEO 1 IN
VIDEO 2 OUT
VIDEO 2 IN
VIDEO 3 IN
VIDEO 4 IN
VIDEO 5 IN
DVD IN
TO IEEE1394 BOARD
P2522 TO NCAF6837 PART-2
P2521 TO NCAF6837 PART-2

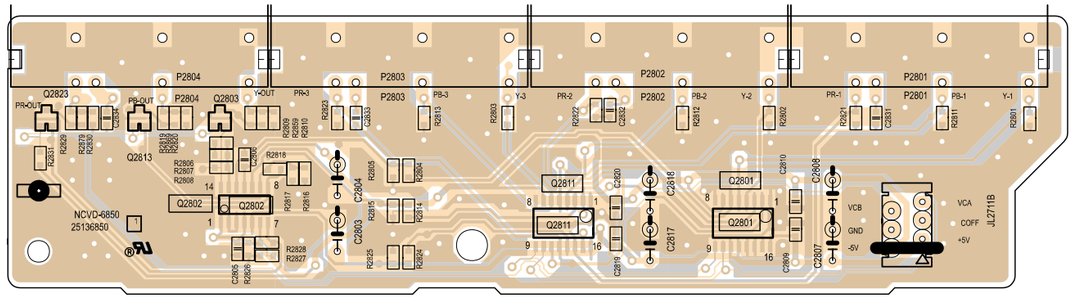
SCHEMATIC DIAGRAM 9

U15 COMPONENT VIDEO TERMINAL SCHEMATIC DIAGRAM (NAVD-6850)



PRINTED CIRCUIT BOARD VIEW 9

U15 COMPONENT VIDEO TERMINAL PC BOARD (NAVD-6850)



U15

COMPONENT VIDEO TERMINAL PC BOARD (NAVD-6850-1F/1G)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q2801,Q2811	222740525R2	74HC4052AF
Q2802	22241442R2	MAX4218ESD
	Transistors	
Q2803,Q2813,Q2823	2216031R2 or 2216032R2	RN1444-A or RN1444-B
	Capacitors	
C2803,C2807	354741009	10 μF, 16 V, Elect.
C2808,C2817,C2818	354741009	10 μF, 16 V, Elect.
	Plugs	
JL2711B	25055627	NPLG-6P589
P2801-P2804	25045607	NPJ-3PDGLR414

U16

D / A CONVERTER CIRCUIT PC BOARD (NAVD-6860-2)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Photocouplers	
Q6201,Q6211	24120080 or	ON313 or
	24120043	ON313
	ICs	
Q8001,Q8002	22241460R2	PCM1704
Q8003,Q8033	22241488R2	OPA2604AU
Q8004,Q8008	22241472R2	NJM2114M-D
Q8031,Q8032	22241460R2	PCM1704
Q8034,Q8038	22241472R2	NJM2114M-D
Q8101,Q8301,Q8501	22241489R2	AD1853JRS
Q8102,Q8103	22241488R2	OPA2604AU
Q8104,Q8304,Q8504	22241472R2	NJM2114M-D
Q8302,Q8303	22241488R2	OPA2604AU
Q8491	222780155JRC	NJM78M15FA
Q8502,Q8503	22241488R2	OPA2604AU
Q8591,Q8691	222780055JRC	NJM78M05FA
Q8701	2213631 or	RN1241-A or
	222740077R2TO	TC74HCT7007AF
Q8704	2213631 or	RN1241-A or
	22241490R3	SM5847AF
Q8709	22278033ER2NEC	MPC29M33T
Q8710	22241534	XC17S05XLPD8C
Q8775	222780053R2JR	NJM78L05UA
Q8776	22240928R2	TC9246F
	Transistors	
Q6202,Q6203	2214230 or	RN1202 or
	2213290	DTC114ES
Q6212,Q6213	2214230 or	RN1202 or
	2213290	DTC114ES
Q6231-Q6241	2212853 or	2SB1068-K or
	2212855	2SB1068-U
Q6232,Q6242	2214230 or	RN1202 or
	2213290	DTC114ES
Q8005-Q8007	2213631	RN1241-A
Q8035-Q8037	2213631	RN1241-A
Q8091,Q8291	2211255	2SC1815-GR
Q8092,Q8292	2203480	2SB1642
Q8191,Q8391	2211455	2SA1015-GR
Q8192,Q8392	2203470	2SD2531
Q8706 -Q8708	2213510	DTA114ES
Q8995 -Q8998	2211945	2SK246-GR
	Diodes	
D6201	223163 or	1SS133 or
	223205 or	1SS270A or
	223222	WG713A
D6921,D6922	22380046 or	AM01Z or
	22380260 or	RL1N4003 or
	22380035	GP104003E
D6931,D6932	22380046 or	AM01Z or
	22380260 or	RL1N4003 or
	22380035	GP104003E
D8091,D8191	224470562	MTZJ5.6B, Zener diode
D8092,D8292	22380285F or	RS403M or
	22380022F	RBV402
D8291,D8391	224471503	MTZJ5.6B, Zener diode
	Coils	
L8001,L8002	231237M022R2	NCH-1471, Choke coil
L8101,L8102	231237M022R2	NCH-1471, Choke coil
L8701 -L8704	231237M022R2	NCH-1471, Choke coil
L8705	230959R1	BK1608HS102-T, EMI filter
L8775,L8776	231237K470R2	NCH-1479, Choke coil
L8777	230958R1	BK1608HS102-T, EMI filter
R8703,R8737,R8738	230959R1	BK1608HS102-T, EMI filter
R8731,R8741	230955R2	BK1608HS102-T, EMI filter
R8754,R8755	230955R2	BK1608HS102-T, EMI filter
R8761-R8766	230955R2	BK1608HS102-T, EMI filter

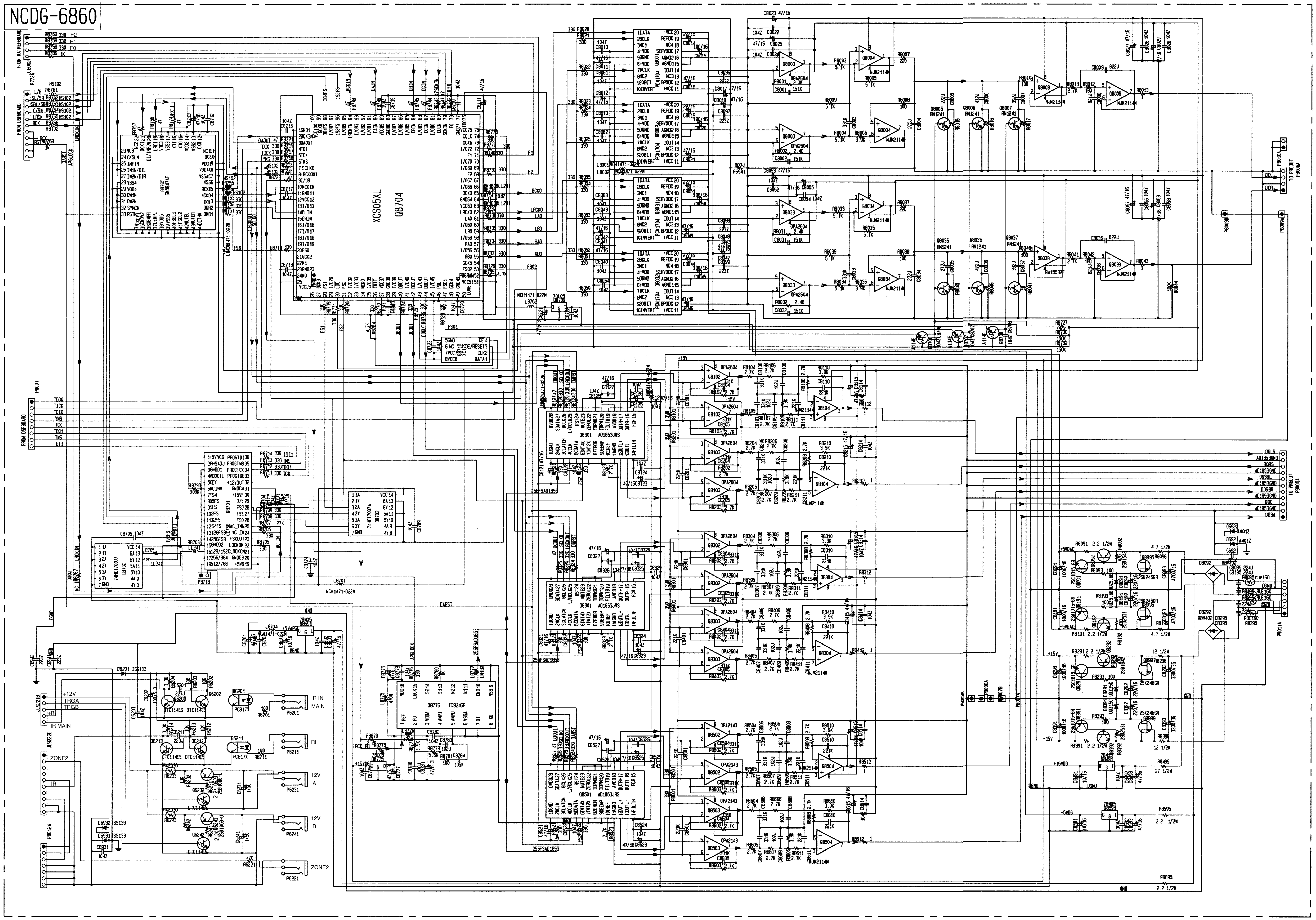
CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitors	
C6201,C6211,C6921	374722234	0.022 μF ± 5 %, 50 V, Plastic
C6202	393321017	100 μF, 6.3 V, Elect.
C6231,C6241	393380107	1 μF, 50 V, Elect.
C6941,C6942,C8095	374722234	0.022 μF ± 5 %, 50 V, Plastic
C8001,C8002	374721515	150 pF ±10 %, 50 V, Plastic
C8003, C8033	374723315	330 pF ±10 %, 50 V, Plastic
C8004,,C8005	374722724	2700 pF ±5 %, 50 V, Plastic
C8006,C8036	374724724	4700 pF ±5 %, 50 V, Plastic
C8007.C8037	374723924	3900 pF ±5 %, 50V, Plastic
C8008,C8038	374728214	820 pF ±5 %, 50 V, Plastic
C8009,C8039	374728224	8200 pF ±5 %, 50 V, Plastic
C8011,C8012	393344707	47 μF, 16 V, Elect.
C8014,C8019	393342207	22 μF, 16 V, Elect.
C8015,C8020	393341017	100 μF, 16 V, Elect.
C8016-C8018	393344707	47 μF, 16 V, Elect.
C8021,C8023,C8025	393344707	47 μF, 16 V, Elect.
C8027,C8029	393344707	47 μF, 16 V, Elect.
C8031,C8032	374721515	150 pF ±10 %, 50 V, Plastic
C8034,C8035	374722724	2700 pF ±5 %, 50 V, Plastic
C8041,C8042	393344707	47 μF, 16 V, Elect.
C8044,C8051	393342207	22 μF, 16 V, Elect.
C8045,C8050	393341017	100 μF, 16 V, Elect.
C8046-C8049	393344707	47 μF, 16 V, Elect.
C8053,C8055	393344707	47 μF, 16 V, Elect.
C8057,C8059,C8115	393344707	47 μF, 16 V, Elect.
C8091,C8191	393341027S	1000 μF, 16 V, Elect.
C8092,C8192	393342217	220 μF, 16 V, Elect.
C8093,C8193	393344727S	4700 μF, 16 V, Elect.
C8101,C8110, C8111	374722215	220 pF ±10 %, 50 V, Plastic
C8104-C8107	374723315	330 pF ±10 %, 50 V, Plastic
C8108,C8109	374721024	1000 pF ±5 %, 50 V, Plastic
C8121,C8123	393344707	47 μF, 16 V, Elect.
C8125,C8127,C8215	393344707	47 μF, 16 V, Elect.
C8195,C8295,C8395	374722244	0.22 μF ± 5 %, 50 V, Plastic
C8201,C8210,C8211	374722215	220 pF ±10 %, 50 V, Plastic
C8204-C8207	374723315	330 pF ±10 %, 50 V, Plastic
C8208,C8209	374721024	1000 pF ±5 %, 50 V, Plastic
C8291,C8391	393341027S	1000 μF, 16 V, Elect.
C8292,C8392	393342217	220 μF, 16 V, Elect.
C8293,C8393	393363327S	3300 μF, 35 V, Elect.
C8301,C8310,C8311	374722215	220 pF ±10 %, 50 V, Plastic
C8304-C8307	374723315	330 pF ±10 %, 50 V, Plastic
C8308,C8309	374721024	1000 pF ±5 %, 50 V, Plastic
C8315,C8321	393344707	47 μF, 16 V, Elect.
C8323,C8325,C8327	393344707	47 μF, 16 V, Elect.
C8401,C8410,C8411	374722215	220 pF ±10 %, 50 V, Plastic
C8404-C8407	374723315	330 pF ±10 %, 50 V, Plastic
C8408,C8409	374721024	1000 pF ±5 %, 50 V, Plastic
C8415,C8515	393344707	47 μF, 16 V, Elect.
C8491,C8591,C8691	393341007	10 μF, 16 V, Elect.
C8501,C8510,C8511	374722215	220 pF ±10 %, 50 V, Plastic
C8504-C8507	374723315	330 pF ±10 %, 50 V, Plastic
C8508,C8509	374721024	1000 pF ±5 %, 50 V, Plastic
C8521,C8523,C8525	393344707	47 μF, 16 V, Elect.
C8527,C8593	393344707	47 μF, 16 V, Elect.
C8601,C8610 ,C8611	374722215	220 pF ±10 %, 50 V, Plastic
C8604-C8607	374723315	330 pF ±10 %, 50 V, Plastic
C8608,C8609	374721024	1000 pF ±5 %, 50 V, Plastic
C8615,C8693	393344707	47 μF, 16 V, Elect.
C8701,C8703	393344707	47 μF, 16 V, Elect.
C8711C8713,C8493	393344707	47 μF, 16 V, Elect.
C8721,C8776	354724709	47 μF, 6.3 V, Elect.
C8777,C8781	354724709	47 μF, 6.3 V, Elect.

CIRCUIT NO.	PART NO.	DESCRIPTION
	Thermistors	
R6233-R6243	4000195	RXE030
R8095 ,R8195	4000200	RXE030
R8295, R8395	4000200	RXE030
	Resistors	
R8091,R8191,R8291	453530224	2.2 Ω±5 %, 1/2 W, Metal oxide
R8096,R8196	453530474	4.7 Ω±5 %, 1/2 W, Metal oxide
R8296,R8396	443521204	12 Ω±5 %, 1/2 W, Metal oxide
R8391,R8595,R8695	453530224	2.2 Ω±5 %, 1/2 W, Metal oxide
R8495	443522704	27 Ω±5 %, 1/2 W, Metal oxide
	Sockets	
JL8002A	25051088	NSCT-4P875, Wire holder
JL9221A	25051089	NSCT-5P876, Wire holder
P772A	25052439R2	NSCT-11P2336, Wire holder
JL9222A	25051094	NSCT-10P881, Wire holder
	Jacks	
P6201,P6211,P6221	25045204	HSJ0847-01-010
P6231,P6241	25045204	HSJ0847-01-010
	Plugs	
P8001	25055152	NPLG-8P136
P8005A	25055141	NPLG-11P125
P8006A	25055134	NPLG-4P118
P8010A	25055165	NPLG-2P149
P8718	25055038	NPLG-2P29
P9011A	25055169	NPLG-6P153
P9012A	25055409	NPLG-7P391
	Radiators	
Q8092A,Q8192A,Q8691A	27160461	RAD-132
Q8292A,Q8392A	27160179	
	Bus bar	
P8009	27141754	BBL60
	Cushion	
A6001	28141443	DAC
	Screws	
Q8092B,Q8192B,Q8292B	82143010	3P+10FN(BC)
Q8392B,Q8691B	82143010	3P+10FN(BC)

A B C D E F G H

SCHEMATIC DIAGRAM 10

U16 D/A CONVERTER CIRCUIT SCHEMATIC DIAGRAM (NADG-6860)


NCDG-6860
FROM MATHERBOARD
FROM DSPBOARD
XCS05XL
Q8704
Q8705
SM5847AF
Q8701
Q8702
74HCT7007A
Q8703
74HCT7007A
Q8710
XC17
PCM1704
OPA2604
NJM2114M
BA15532F
AD1853JRS
Q8101
Q8301
Q8501
OPA2143
Q8776
TC9246F
TO PREOUT
P8006A
P8005A
P9011A
P9012A
JL9221B
JL9222B
+12V
TRGA
TRGB
IR MAIN
ZONE2
IR
IR IN
MAIN
RI
12V
A
12V
B
ZONE2
P6201
P6211
P6231
P6241
P6221
DOLS
DORS
DOSBL
DOSBR
DOC
DOSW
AD1853GND
DGND
GND
+5VDAC
-5VDAC
+15V
-15V
+15VDG
+5VDG

1 2 3 4 5

U17

XLR JACK PC BOARD(1) (NAAF-6861-2F/2G/2H/2I)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q5802-Q5805	22241472R2	NJM2114M-D
	Transistors	
Q5811-Q5815	2213632 or	RN1241-B or
	2213631	RN1241-A
Q5822-Q5825	2213632 or	RN1241-B or
	2213631	RN1241-A
Q5832-Q5835	2213632 or	RN1241-B or
	2213631	RN1241-A
Q5842-Q5845	2213632 or	RN1241-B or
	2213631	RN1241-A
	Capacitors	
C5802-C5805	363153304	330 pF ±5 %, 50 V, MI
C5812-C5815	393884707	47 µF, 50 V, Elect.
C5822-C5825	363153304	330 pF ±5 %, 50 V, MI
C5832-C5835	393884707	47 µF, 50 V, Elect.
C5842-C5845	393884707	47 µF, 50 V, Elect.
C5852-C5855	374721024	1000 pF ±5 %, 50 V, Plastic
C5862-C5865	374721024	1000 pF ±5 %, 50 V, Plastic
C5872-C5875	374724714	470 pF ±5 %, 50 V, Plastic
C5892-C5895	393344707	47 µF, 16 V, Elect.
C5902-C5905	393344707	47 µF, 16 V, Elect.
	Plugs	
P4723A	25055140	NPLG-10P124
P5802-P5805	25056026	NPLG-3P976

U19

PRIMARY CIRCUIT PC BOARD (NAPS-6863-2F/2G/2H/2I)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q9501	221282 or	DTC144ES or
	2213560	RN1204
Q9502	2213284 or	2SC1740S-R or
	2212115	2SC2458-GR
	Diodes	
D9401-D9404	22380035 or	GP104003E or
	22380260	RL1N4003
D9501	223234R2 or	1SS352 or
	223269R2	1SS355
	Transformer	
T9002	2300670A	⚠NPT-1111D <UDD,UDT>
	2300671A	⚠NPT-1111P <UPP,UPT>
	2300672A	⚠NPT-1111DG <UGT>
	2301238	⚠NPT-1111 <UJJ>
	Capacitors	
C9403	393362217	220 µF, 35 V, Elect.
C9002	3500196S	RE275V-103M, IS capacitor
	Resistors	
R9001	431533355	⚠RC1/2GFKUL-3.3M, Solid <UDD,UDT>
R9401	453532294	0.22 Ω ±5 %, 1/2 W, Metal oxide
	Thermistor	
R9002	4000147	⚠S5R114 <UPP,UPT,UGT>
	Relay	
RL9001	25065583	⚠NRL-1P5A-DC12-139 <UGT,UPP,UPT>
	25065584	⚠NRL-1P10A-DC12-140 <UDD,UDT,UJJ>
	Plug	
P9001A	25055880	⚠NPLG-3P836, AC Inlet <UJJ>
	25055960	⚠NPLG-2P913, AC Inlet <UDD,UDT,UPP,UPT,UGT>
	Socket AS	
P9007	2009990606	NSAS-4P0820
	Plug	
P9011A	25055675	NPLG-2P631
	Socket	
P9012	25050675	NSCT-7P479, Socket
	Fuse holders	
F9001A	25050065	⚠YSH403T, Fuse holder <UDD,UDT>
F9002A	25050065	⚠YSH403T, Fuse holder <UPP,UPT,UGT>
F9004A	25050065	⚠YSH403T, Fuse holder <UJJ>

U18

XLR JACK PC BOARD (2) (NAAF-6862-2F/2G/2H/2I)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q5800,Q5801	22241472R2	NJM2114M-D
Q5806,Q5807	22241472R2	NJM2114M-D
	Transistors	
Q5810, Q5816 ,Q5817	2213631 or	RN1241-A or
	2213632	RN1241-B
Q5820 ,Q5821	2213632 or	RN1241-B or
	2213631	RN1241-A
Q5826 ,Q5827	2213631 or	RN1241-A or
	2213632	RN1241-B
Q5830 ,Q5831	2213632 or	RN1241-B or
	2213631	RN1241-A
Q5836 ,Q5837	2213631 or	RN1241-A or
	2213632	RN1241-B
Q5840 ,Q5841	2213632 or	RN1241-B or
	2213631	RN1241-A
Q5846 ,Q5847	2213632 or	RN1241-B or
	2213631	RN1241-A
	Capacitors	
C5800,C5801	363153304	330 pF ±5 %, 500 V, MI capacitor
C5806 ,C5807	363153304	330 pF ±5 %, 500 V, MI capacitor
C5810,C5811	393884707	47 µF,50 V, Elect.
C5816,C5817	393884707	47 µF,50 V, Elect.
C5820 ,C5821	363153304	330 pF ±5 %, 500 V, MI capacitor
C5826,C5827	363153304	330 pF ±5 %, 500 V, MI capacitor
C5830,C5831	393884707	47 µF,50 V, Elect.
C5836,C5837	393884707	47 µF,50 V, Elect.
C5840,C5841	393884707	47 µF,50 V, Elect.
C5846,C5847	393884707	47 µF,50 V, Elect.
C5850 ,C5851,C5855	374721024	1000 pF ±5 %, 50 V, Plastic
C5857,C5860 ,C5861	374721024	1000 pF ±5 %, 50 V, Plastic
C5866,C5867	374721024	1000 pF ±5 %, 50 V, Plastic
C5870 ,C5871	374724714	470 pF ±5 %, 50 V, Plastic
C5876,C5877	374724714	470 pF ±5 %, 50 V, Plastic
C5890,C5891	393344707	47 µF, 16 V, Elect.
C5896,C5897	393344707	47 µF, 16 V, Elect.
C5900,C5901	393344707	47 µF, 16 V, Elect.
C5906,C5907	393344707	47 µF, 16 V, Elect.
	Resistors	
R5800-R5807	443622714	270 Ω ±5 %, 1 W, Metal oxide
R5810-R5817	443622234	22 kΩ ±5 %, 1 W, Metal oxide
R5820-R5827	443621034	10 kΩ ±5 %, 1 W, Metal oxide
R5830-R5837	443621034	10 kΩ ±5 %, 1 W, Metal oxide
R5840-R5847	443622714	270 Ω ±5 %, 1 W, Metal oxide
R5850-R5857	443622714	270 Ω ±5 %, 1 W, Metal oxide
R5860-R5867	443621014	100 Ω ±5 %, 1 W, Metal oxide
R5870-R5877	443621014	100 Ω ±5 %, 1 W, Metal oxide
R5880-R5887	443622234	22 kΩ ±5 %, 1 W, Metal oxide
R5890-R5897	443622234	22 kΩ ±5 %, 1 W, Metal oxide
R5900-R5907	443621014	100 Ω ±5 %, 1 W, Metal oxide
R5910-R5917	443621014	100 Ω ±5 %, 1 W, Metal oxide
	Plugs	
P4722A	25055139	NPLG-9P123
P5800,P5801	25056026	NPLG-3P976
P5806,P5807	25056026	NPLG-3P976

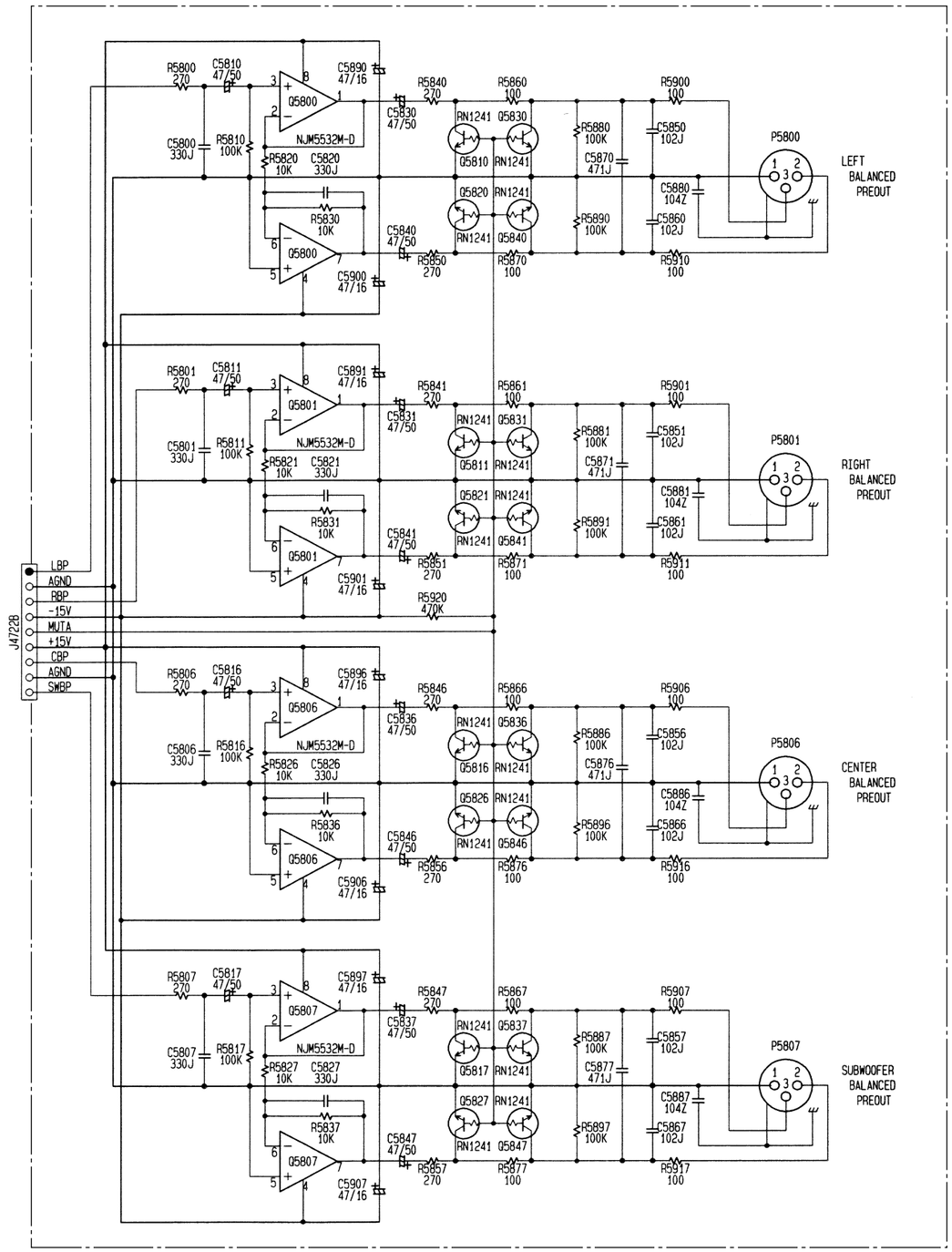
U20

POWER SWITCH PC BOARD (NAPS-6864-2F/2G/2H/2I)

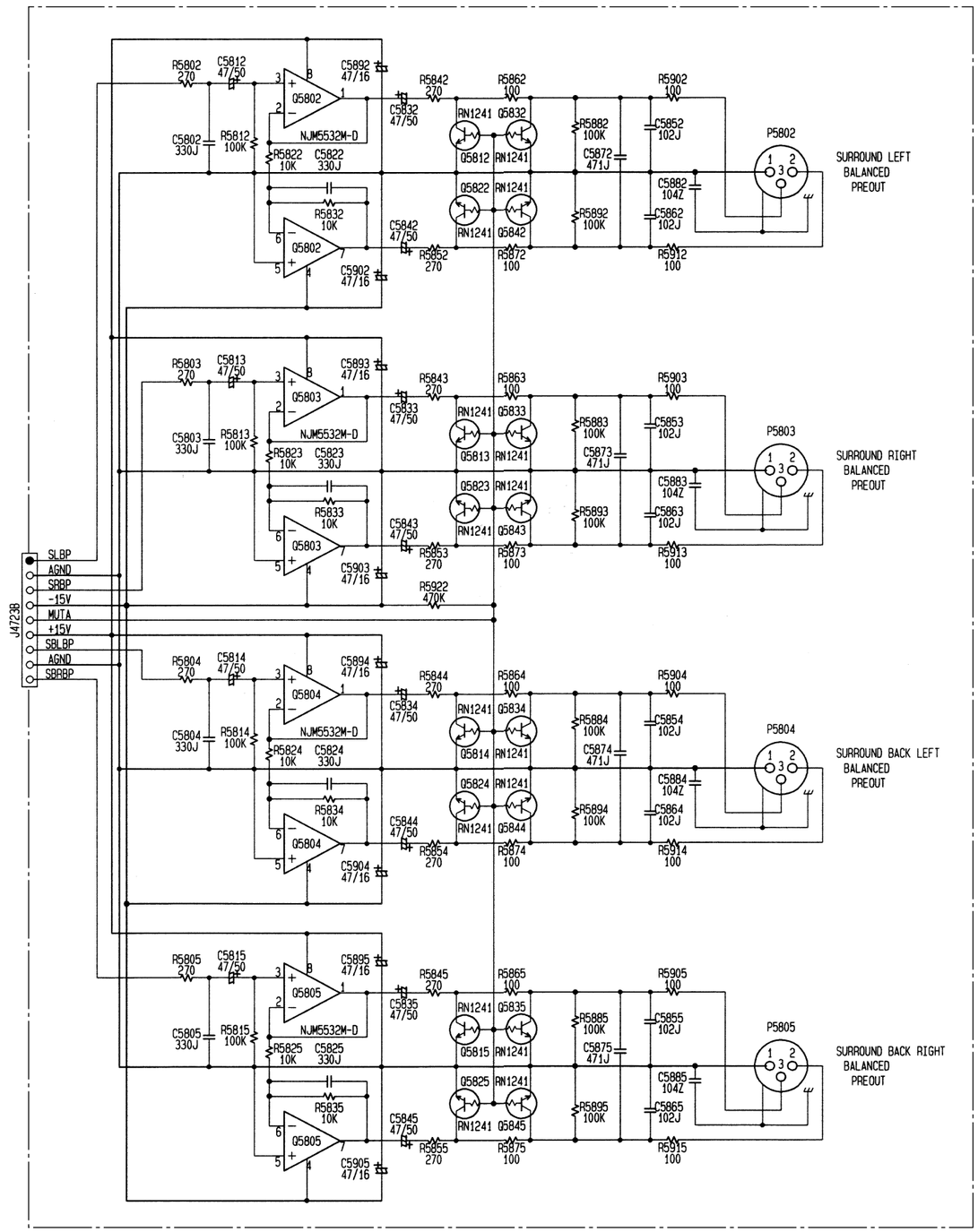
CIRCUIT NO.	PART NO.	DESCRIPTION
	Capacitor	
C9001	3500196S	⚠RE275V-103M, IS capacitor
	Push switch	
S9001	25035550	⚠NPS-111-L512P, power switch
	Plug	
P9007C	CNVC	NPLG-2P632

SCHEMATIC DIAGRAM 11

U18 XLR JACK SCHEMATIC DIAGRAM (NAAF-6862)



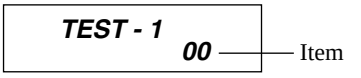
U17 XLR JACK SCHEMATIC DIAGRAM (NAAF-6861)



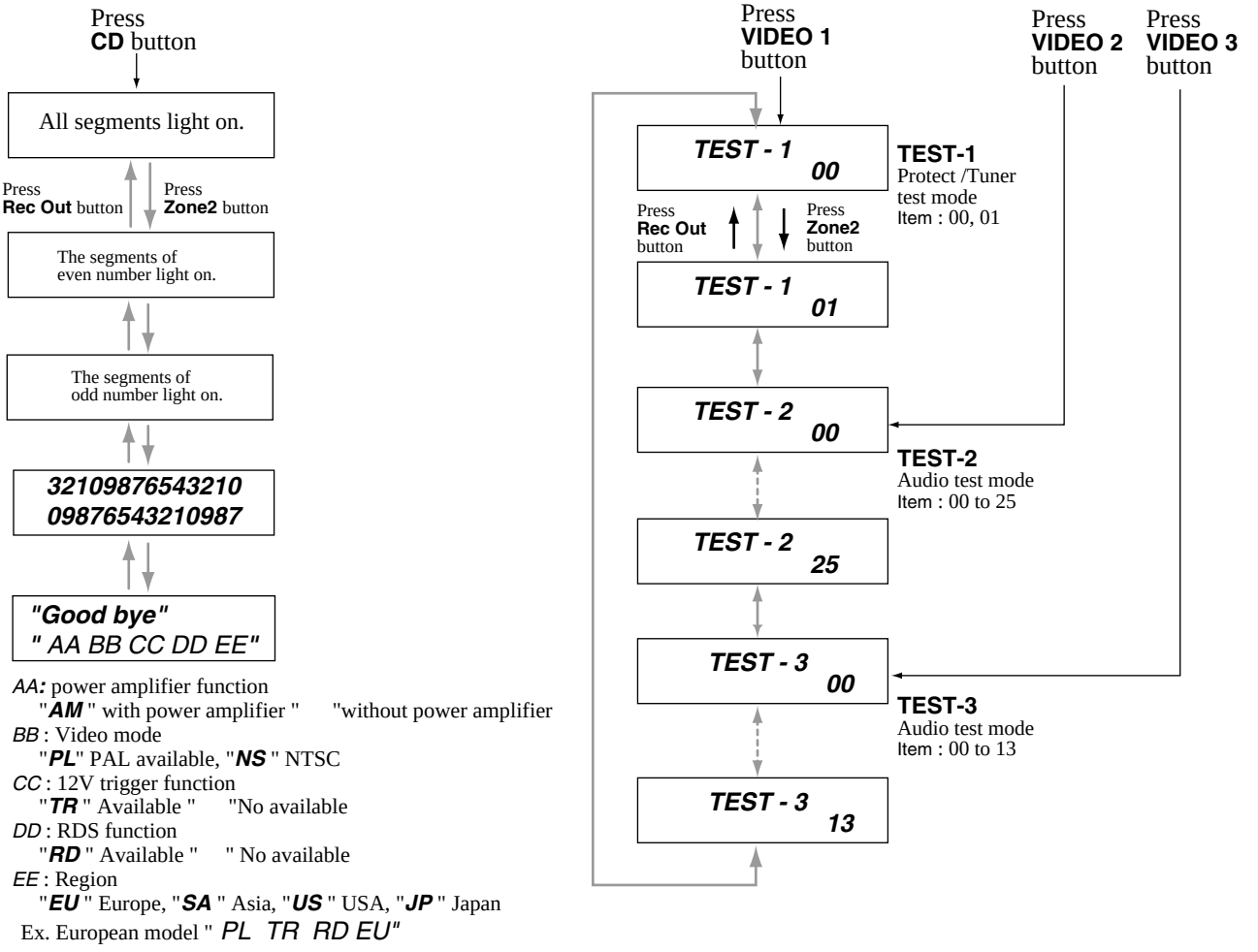
CONFIRMATION

1.TEST MODE

1. Turn **POWER** switch to set the the unit to standby state.
   The STANDBY indicator will light up.
2. Press **STANDBY/ON** button to turn on the unit.
   The display will light up and the STANDBY indicator will turn off.
3. Press and hold down **CD** button, then press **DISPLAY** and **STANDBY/ON** buttons at the same time.
   During "*Test - 1 00*" on the FL tube light on.



4. Press the **OPEN/CLOSE** button to open the front door.
5. Press the **CD,VIDEO 1, VIDEO 2, or VIDEO 3** button to set the unit to the test mode shown below.

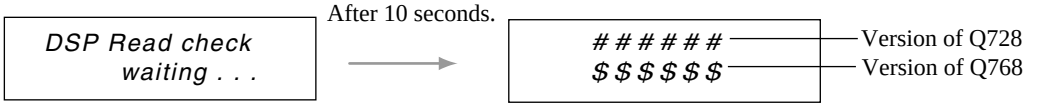


AA: power amplifier function
"***AM***" with power amplifier " "without power amplifier
BB : Video mode
"***PL***" PAL available, "***NS***" NTSC
CC : 12V trigger function
"***TR***" Available " "No available
DD : RDS function
"***RD***" Available " " No available
EE : Region
"***EU***" Europe, "***SA***" Asia, "***US***" USA, "***JP***" Japan
Ex. European model " *PL TR RD EU*"

2. CONFIRMATION OF READING AND WRITING OPERATION OF FLASH MEMORY

How to set the unit to the test mode "test 1-00".
During " *TEST 1-00* " on the FL tube light on, press **VIDEO 4** button to set the unit confirmation mode of this item.

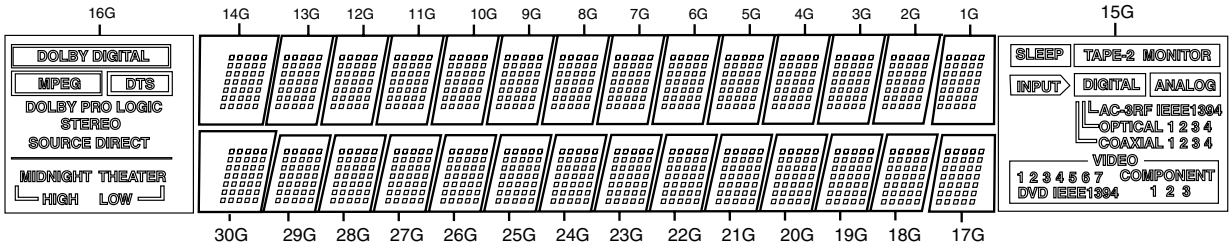
Confirm the display on FL tube.

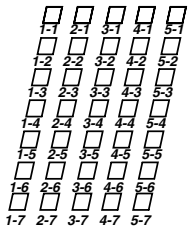


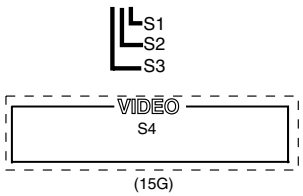
After confirmation, turn the **STANDBY/ON** switch to OFF to reset the unit.

FL TUBE VIEW

Q7401 : 30-BT-03G


16G
14G 13G 12G 11G 10G 9G 8G 7G 6G 5G 4G 3G 2G 1G
15G
DOLBY DIGITAL
MPEG DTS
DOLBY PRO LOGIC
STEREO
SOURCE DIRECT
MIDNIGHT THEATER
HIGH LOW
SLEEP TAPE-2 MONITOR
INPUT DIGITAL ANALOG
AC-3RF IEEE1394
OPTICAL 1 2 3 4
COAXIAL 1 2 3 4
VIDEO
1 2 3 4 5 6 7 COMPONENT
DVD IEEE1394 1 2 3
30G 29G 28G 27G 26G 25G 24G 23G 22G 21G 20G 19G 18G 17G





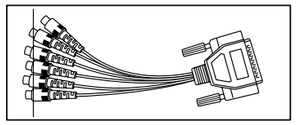
	30G～17G	16G	15G	14G～1G		30G～17G	16G	15G	14G～1G
P1	—	—	SLEEP	1-1	P36	1-1	—	—	—
P2	—	—	TAPE-2 MONITOR	2-1	P37	2-1	—	—	—
P3	—	—	INPUT	3-1	P38	3-1	—	—	—
P4	—	—	DIGITAL	4-1	P39	4-1	—	—	—
P5	—	—	ANALOG	5-1	P40	5-1	—	—	—
P6	—	—	—	1-2	P41	1-2	—	—	—
P7	—	—	S1	2-2	P42	2-2	—	—	—
P8	—	—	AC-3RF	3-2	P43	3-2	—	—	—
P9	—	—	IEEE1394	4-2	P44	4-2	—	—	—
P10	—	—	S2	5-2	P45	5-2	—	—	—
P11	—	—	OPTICAL	1-3	P46	1-3	—	—	—
P12	—	—	1 (OPTICAL)	2-3	P47	2-3	—	—	—
P13	—	—	2 (OPTICAL)	3-3	P48	3-3	—	—	—
P14	—	—	3 (OPTICAL)	4-3	P49	4-3	—	—	—
P15	—	—	4 (OPTICAL)	5-3	P50	5-3	—	—	—
P16	—	—	S3	1-4	P51	1-4	—	—	—
P17	—	—	COAXIAL	2-4	P52	2-4	—	—	—
P18	—	—	1 (COAXIAL)	3-4	P53	3-4	—	—	—
P19	—	—	2 (COAXIAL)	4-4	P54	4-4	—	—	—
P20	—	—	3 (COAXIAL)	5-4	P55	5-4	—	—	—
P21	—	—	4 (COAXIAL)	1-5	P56	1-5	—	—	—
P22	—	—	S4	2-5	P57	2-5	—	—	—
P23	—	DOLBY DIGITAL	1 (VIDEO)	3-5	P58	3-5	—	—	—
P24	—	(DOLBY DIGITAL)	2 (VIDEO)	4-5	P59	4-5	—	—	—
P25	—	MPEG	3 (VIDEO)	5-5	P60	5-5	—	—	—
P26	—	(MPEG)	4 (VIDEO)	1-6	P61	1-6	—	—	—
P27	—	DTS	5 (VIDEO)	2-6	P62	2-6	—	—	—
P28	—	(DTS)	6 (VIDEO)	3-6	P63	3-6	—	—	—
P29	—	DOLBY PRO LOGIC	7 (VIDEO)	4-6	P64	4-6	—	—	—
P30	—	STEREO	DVD	5-6	P65	5-6	—	—	—
P31	—	SOURCE DIRECT	IEEE1394	1-7	P66	1-7	—	—	—
P32	—		COMPONENT	2-7	P67	2-7	—	—	—
P33	—	MIDNIGHTTTHEATER	1 (COMPONENT)	3-7	P68	3-7	—	—	—
P34	—	HIGH	2 (COMPONENT)	4-7	P69	4-7	—	—	—
P35	—	LOW	3 (COMPONENT)	5-7	P70	5-7	—	—	—

PACKING VIEW

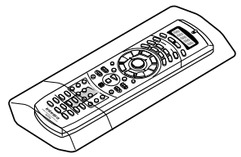
Accessary

AM loop antenna x 1
232140

T-shaped FM antenna x 1
292142 (UDD)
292116 (Other models)

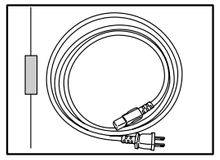


DB-25 RCA6ch cable x 1
2010386



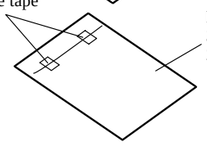
Remote controller x 1
RC-418M
24140418A

Batteries
(AA, R6, or UM-3) x 2
3010054



Power cord x 1 ⚠
AS-UC-2 253301HIT (UDD, UDT)
AS-CEE-3 253302 (UPP,UPT,UGT)

Antenna adaptor x1
25065462 (UPT,UDT,UGT)



Printed matters

UDD

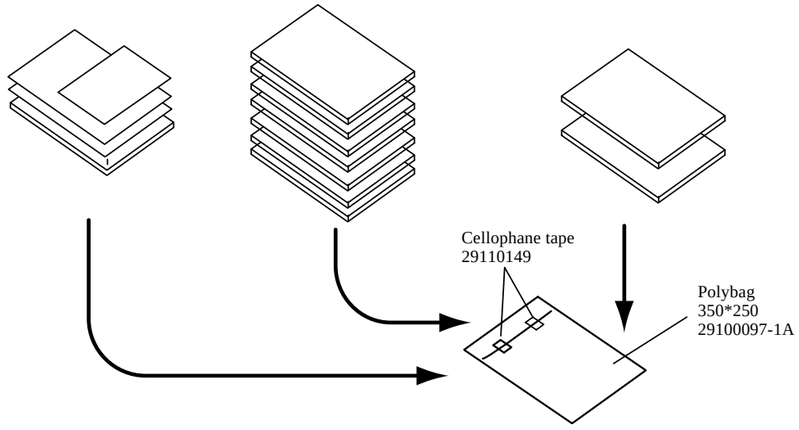
29095865	Sheet Integra
29365086	Warranty card
29342895	Instruction manual E DIG
29342886A	Instruction manual E

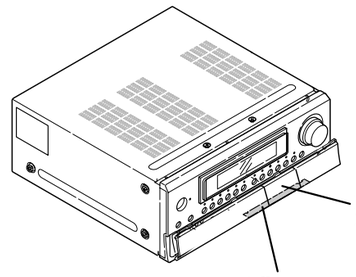
UPP

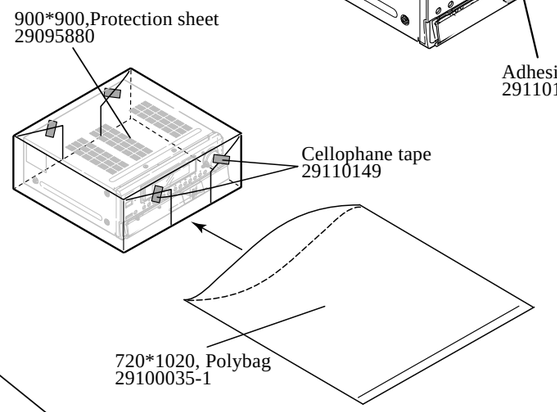
29342886A	Instruction manual E
29342887	Instruction manual F
29342888	Instruction manual S
29342889	Instruction manual G
29342890	Instruction manual D
29342891	Instruction manual SW
29342892	Instruction manual I
29342895	Instruction manual E DIG

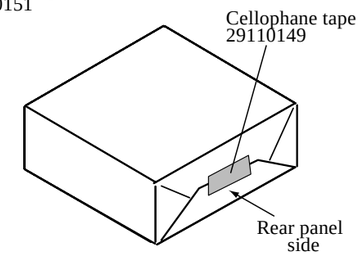
UPT/UDT/UGT

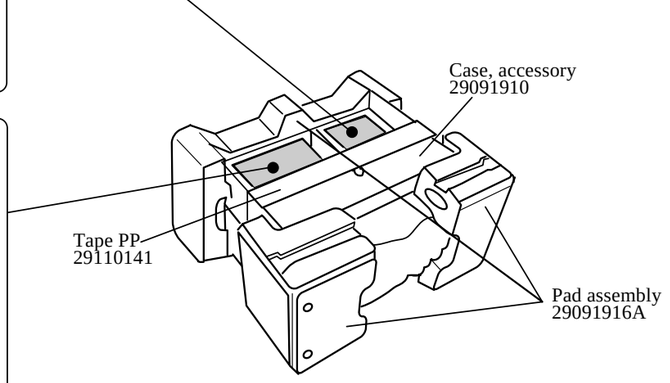
29342886A	Instruction manual E
29342893	Instruction manual T
29342895	Instruction manual E DIG

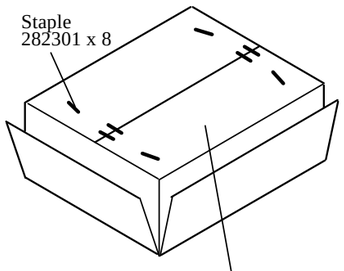












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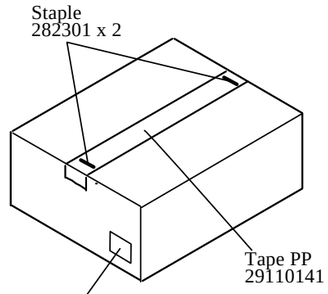

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29362607 Label EAN <UPP,UDT,UPT,UGT>

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